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**Davidsohn, H.—Ueber die Reaktion der Frauenmilch, Zeitsch. for Kinderh., Vol. 9, 1913, page 15.

***Friedenthal, H.—Ueber die Eigenschaften künstlicher Milchersera und ueber die Herstellung eines künstlichen Menschenmilchersatzes. Zentralb. f. Physiol., Vol. 24—1910—page 687.

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No 11

Original Articles

INCREASING RESPONSIBILITIES OF THE MEDICAL PROFESSION*

CLARENCE COOK LITTLE,
President University of Michigan

ANN ARBOR, MICH.

Mr. President, I want to say just a few words about Dr. Darling. He is a person of whom the profession of medicine can well afford to honor and of whom the state of Michigan can also well afford to be proud. Those of us in Ann Arbor, even those of us who have come there recently, have become so fond of him, so deeply interested in him as a man that we feel that no President of a State Society could have been chosen who so clearly comprises the human qualities with marked achievement, great integrity and courage in his chosen field. It is a very great pleasure and privilege to come here tonight under his presidency of the State Society and to aid in whatever poor way I can the program of the meeting. (Applause).

I had not seen a copy of the address which Dr. Darling gave before he gave it, but it brings out a splendid connecting link with the few things that I have to say to you. If I talk about the increasing importance and responsibilities of the medical profession, please, those of you who are not members of that profession, try to look at its increasing responsibility as a part of your own problems as well as a matter to be laid at the door of the medical profession itself. Do this because one can't have an increasing responsibility on the part of a profession unless the community as a whole, the citizens as a whole are ready to enlarge and support that responsibility as it naturally develops.

The *preventive* phase of medicine, the effort to keep well rather than to cure has been referred to very definitely by Dr. Darling. It is

the keynote of modern medicine. It has at once multiplied by many times the field of activity of the medical profession because instead of waiting until sickness occurs and then practicing its curative arts, the medical profession now reaches out into the citizenry and attempts to educate that citizenry so that it may prolong its periods of health and diminish its periods of sickness.

Now, when a profession, the chief activity of which has been dealing with disease, adopts that attitude and changes its emphasis, we can look for new factors in the situation. A change of that kind does not come about within a profession unless certain general factors underlying the population as a whole very materially change, and that, I believe, is the case as regards our commonwealth of Michigan and as regards the whole United States.

Preventive phases of medicine, then, apply to all people and as such there are certain very definite guiding principles that we may look forward to if we are to utilize that phase of medicine to its fullest capacity. In the first place, the inter-relation of the medical profession with the ordinary citizens of a state must begin early. Dr. Darling has said that it should begin in the form of medical examinations and that medical examinations should begin in the kindergarten. Yes, they should begin there and they should begin, if possible, further back than that, at the birth of children; and they should begin even further back than that, in maternal welfare and maternal care and examinations of potential parents. One should, in other words, begin to practice measures of preventive medicine just as early in the potential lifetime of an individual as one can. An ounce of prevention is worth a pound of cure. No truer statement was ever made. It is easier to apply an ounce of prevention to a situation when the situation is small and controlled, and it is easier to apply preventive medicine to a human individual when that individual is small and controlled. It becomes increasingly harder as the individual becomes larger physically, more complex psychologically and more difficult of geographical control, moving around as

* Delivered at the General Session 106th Annual Meeting Michigan State Medical Society, Lansing, September 1926.

a grown up human being in many different environments.

It stands to reason, then, that all sound preventive measures should trace back to the earliest possible time in the lifetime of any human individual. That is a common sense proposition. If you are trying to affect the course of a stream of water, catch it near its source; it is easier to divert, to modify, to do things with it at that stage than it is after it becomes a fully developed river.

Second, these examinations, these tests of a preventive nature should recur at regular intervals. Dr. Darling has also brought out that point. Such examinations should be continued at regular intervals during the lifetime of the individual because *rate* of development and *type* of development are very important phases of the life and activities of all of us. Some of us develop fast and some more slowly. Any of you who have passed through what almost appeared to be a permanent long-legged, gawky stage can realize what slow development is, and those of you who matured early and were a precocious child and were able to get ahead of your class in your studies and were "old" for your age realize what that meant to you.

There is a great deal of individual difference in the rate of human development, physical, mental and moral. The way to find out about the rate of development is to observe a thing at various periods along its route. If you have any doubt about that, get into a motor trap just once, and you will realize the soundness of the principle of determining the rate of progress by placing people at stated intervals. In just the same way medical examinations at stated intervals determine the method and rate and course of progress of growth of human beings. It is one of the most fascinating things that there is in the world to study today, and we know very, very little about it compared to what we shall know in the next 25 or 50 years. Begin the examinations early and continue them at stated intervals.

Third, make accurate records. It is no good to begin measures early and to examine people at stated intervals if we do not also develop the habit of recording accurately what we find out. Now that is a hard thing to do. It requires special training to make people accurate. Even in places where they are studying biometry and studying it very carefully and are going into the science of statistics, they know that as long as human beings have to record the information certain errors will creep in. Such errors can, however, be cut down to a minimum and can be foreseen and corrected if a whole-hearted effort is made to record information accurately. Today we do not know

even the first thing about ourselves in that respect.

A man who is breeding thoroughbred poultry knows more about the life history of every single hen in his flock than he does about the life history and development of his own children. A man knows more about the rate of development and the record of trotting horses and professional league ball clubs and batting averages than he does about the rate of development and the nature of his own family. It has not been the fashion to put down on paper the records which could have been easily made and would have given us invaluable information, which we now totally lack.

Most of you who have been brought up in the country know the old method of backing the family against the wall as they were growing and putting the book over the head and recording on the wall the various steps up; and you could see the growth. Very, very few people in the medical profession have the time or the inclination at the present time to make any more careful records of their different cases than some such old fashioned sort of procedure. In order that records may some day be brought together and studied by other individuals, accuracy should be encouraged. It has not, up to now, been the fashion, but it must become the fashion if we are to gain any real advantage of taking preventive measures and of making frequent examinations.

That brings me to the fourth and last important phase. In addition to beginning early to make frequent examinations and careful records, the records must be collected and kept where they are available for study. Always, in order to save time, to save human effort, to save money, to save human life, it will be necessary to have such records as we possess where we can reach them easily. A town may have more in its library books than a neighboring town, but if the books are not carefully kept in the building where they can be reached, it does not help in educating the citizens of that town to have two or three or one hundred times as many books as their neighbor. We may make many examinations and keep careful records but if we do not have central stations for the filing of those records where students of medicine and sociologists and other people interested in human health problems can go for study, the effort will largely be wasted and will have to be repeated again every generation. Mind you, if it had been done for 100 years we should be at least 50 or 100 years ahead of the present time in our knowledge of human diseases and how to prevent them.

I think there is no question but that if we had records, we could do very much in the way of progress that is now impossible and

will remain so until we take pains to collect them.

You see there appear to be two very interesting theories in a profession, in a community, in a state, in the country, in the world at large; one is that the existing order of things is good enough, it is comfortable, we can live through it fairly successfully, in spite of Dr. Darling's statement of the cost of preparation for dying. We can even die under it a good deal more comfortably than people used to be able to. In general, it is a pretty good world materially for human animals. There is no question about that. Our food is brought to us with fair regularity; our lodgings are better than they used to be. Our heating and lighting is greatly improved; our methods of transportation are excellent and there is a great temptation to say we are stable, we are secure, we are "all right." Please remember that every civilization that has gone before us, every great human development which has come and gone, could have said the same things. "We have a better system of this, that or the other than the previous civilization, and we ought to survive." Every one of them could have said that, but not one of them would have told the truth if they had done so. There is no reason to believe, without proof at least, that our civilization is immune to the ills that other civilizations have felt. In fact, there are distinct symptoms from the point of view of sociologists that we are already suffering from certain diseases in a fairly aggravated form.

One theory, however, and it is the common one of the ordinary pleasure-loving, happy-go-lucky and extremely lovable type of citizen, is that he doesn't have to worry, he will get along somehow and he will buy his life the way he buys his Ford, with five dollars down and the rest paid up as he goes. Most people are content with that and it works fairly well *for the individual*.

The second theory is that the present time man by his own numbers has created an entirely new environment for himself. Now that at first appearance may sound rather radical, but I believe that a moment's consideration of what is actually happening all around us today will show that the present generation is being brought up in what might be called an entirely new social environment. This country has grown tremendously in its amount of population and the very growth of that population has created an entirely different situation, educationally, religiously, economically, medically, and indeed in every conceivable way. It has made possible the development of specialists in the great cities; it has made possible the cities themselves; it has made possible the railroads to the extent that we find them because of the

immense amount of freight transportation. Such things are utterly unnecessary and non-existent in a smaller place where the inhabitants are more scattered. It has brought about the spread of epidemics. It has made possible preventive medicine because people are gathered together in greater groups where they can be more readily reached. As long as mankind was sparsely scattered through this country he could be just as much as he wanted a wild ass of the prairies and he could bray just as loud as he wanted and nothing but the sunset and the hills around him heard his voice. But that isn't true any more. We are all very much dependent upon each other. We are so dependent upon each other that we take a good proportion of our "out-of-school" education from the daily paper. How much do all of you know about an event like yesterday's election beyond what you have read in the paper? How much do you really *know* about it? You ought not know anything more about it than the one vote that you probably cast or possibly, if you could get together with your wife and make her tell you the way she voted, you might know about two votes.

In the long run we take our education from a centralized organization and we take everything from organizations which are the product of great numbers, great masses of people. Therefore, the second theory, the theory that mankind is in a new environment and must do new things to meet that environment seems to me to be, of the two, the correct theory. There are certain things perhaps that will bring that out more clearly.

In the first place, we have the interest in international reactions, the contacts between nations. Why is that? Why is it that we are interested in European problems more than we were? When people were sparsely scattered in this country and our commerce and our food supply were largely matters of internal interest and our expansion was that of internal growth, we were little interested, but when we and other nations became so large that colonization and invasion was a matter of interest, then the international phases of existence become extremely important.

When a baby is so small that it can't pull itself up to the sides of its own crib, the crib is its world and it pays no attention to the people who come and go through the room, but as soon as the baby outgrows the crib, what happens around it in the room becomes a matter of very great interest. When a nation begins to outgrow its crib and pulls itself up by its hands and looks over the edge of the crib, it becomes interested in the people who later it is going to know. It is a sign of a different environment, a change,—an increase in vision,

some people say, and quite correctly so. The child can see farther than it could when all it could visualize was the walls of its own crib. The *world* can see farther than it used to because there are more people in the room and they are more dependent upon one another.

The changes in governmental control are another indication. When there were relatively few people, it was fairly easy to centralize them around a central governing man or king, a "chief man." When people get so plentiful that they can build up small centers of their own interests, they are apt, figuratively speaking, to thumb their nose at the man who says, "You have to come and report to me every five minutes and tell me what you are doing." People do not instinctively like central control. As a result one finds that democratic forms of government are growing. Why was it that we changed into a democratic form of government as we did? Because as far as our relations were concerned, we were ready to grow, and as far as we can see England was not ready to have us grow at the rate we were ready to expand. It was a question again of the individual reaching a stage where it insisted upon a rate of expansion commensurate with its own powers, and that today is probably the reason why there are new forms of government.

There was no Soviet government in the world a few years ago. Now a great nation is trying the experiment of it. From what we can tell at this distance, it appears to be very largely wrongly conceived, but it certainly is a straw that shows that the wind has been blowing in the direction of a new environment, a new social order. One finds also that the old European nations are not increasing the power of the king. Occasionally a dictatorship is made, but a dictatorship has seldom continued far beyond the life of the man responsible for it. In general there is an unrest, perfectly definitely characteristic of a change of seasons, a spring time, if you please, to look at it that way, in the affairs of mankind as a whole. There is a change from one season to another, and all the signs of government tend to show that.

Legislation governing taxation of the individual is infringing upon matters of personal wealth and its distribution in a way which it never did when there were fewer people to be considered. Does that mean a new economic environment or not? It seems to me perfectly clear that it does. Income taxes, inheritance taxes, things of that kind becoming general in application are a perfectly definite sign of the interdependence of individuals. They no longer are able, as I said before, to stand out on the prairie and make their voice go up against

the empty skies. There are too many other people near them now, they are all interdependent.

Take again the various types of building. A man could build any kind of a house he wanted to one hundred years ago. Now in certain regions homes are very definitely restricted. They are inspected, they are watched over, they are limited when they are not of certain prescribed types. The social order is reaching in to man's habitation and telling him what kind of a house he must live in up to a certain limit. That was not even in people's minds before the great numbers of human beings made it necessary.

Pure food legislation. When people were raising their own foods, when there weren't such great masses to be fed on canned and prepared foods, there seemed to be little need for it. A good many people were raised on farms before pure food legislation ever was thought of, practically speaking. Now it is an absolute necessity for a healthy, well ordered community.

Perhaps more than in any other place do we find clear signs of the changed times when we consider the problem of immigration. Before the war, before we became conscious of how crowded the world was, it was a very unpopular thing to speak of restriction or selection of immigrants. When the war came the restrictive legislation went through like snapping one's fingers and today one finds an increasing, rather than a decreasing tendency to consider carefully the type of people we allow to enter the United States. This is true as regards the type of adult, obvious, living, moving people we allow to come. Could there be anything more clearly a definite invasion of personal rights? Is there any clearer indication necessary that the times have changed and that the American public has admitted that no longer can the individual from here or there say, "I come and I go, I do or I don't as I please"? The individual has become primarily responsible to the state, to the country, to his fellow-men. That is a very, very big advance and it is a tremendous strain for some mentalities. Some whole races of people, some whole organizations, some whole groups of individuals fail entirely to get that point of view. They are living in medieval mental surroundings. The medical profession, however, can not continue to live in such medieval surroundings. I think it recognizes that very clearly, and I think it has moved out and has demanded for itself the increasing responsibility of saying to an individual, "For the public welfare you must do so and so, or you must not do so and so."

The restriction of the feeble-minded and

their segregation is a step in that direction. The sterilization of criminals of certain types is a step just along the same idea as restriction of immigration, it is exactly the same thing. You are saying to that person, "You can't send any more immigrants in the form of your children into the United States." We would say it definitely to an adult foreigner who is a criminal, why shouldn't we say it to one of our own people? It is exactly the same logic at the basis of both of those pieces of legislation, it is exactly the same proposition.

The great Ego, the great individual who could stand up and say, "I demand my rights," is rapidly going out of existence. It is something to be devoutly thankful for. In his place is coming a type of individual whose motto appears to be largely, "How is what I am doing going to affect my fellowman?" Just think of what a tremendous and splendid change that is. After centuries of greed and rapaciousness and of selfishness, the young people of today for the first time find themselves on the threshold of a new order of things. Now educators are going to help them, and preachers are going to help them, and parents are going to help them, but I doubt whether anybody can make the American people come to its own sense of proper humility any faster than the medical profession if it has the courage to do it. If you can possibly see the immense vision that there is and can have the courage to preach and practice public consciousness before self-consciousness, you will be doing a very great service.

It is a question in my mind as to whether the general public will meet that with any degree of applause. The chances are that they will make it hard for you, that you will be branded as visionary, radical, impractical, false to the existing tenets of your profession. You will not be particularly popular and the more powerful the individual and the more material goods he has his hands on, the more he will object to that type of philosophy. But from our very size the fact that the world is pretty nearly full of these human beings like ourselves is something from which we can not escape. Some people regard it as a tragedy and would rather keep power and selfish sway. Other people see it as a great challenge to our civilization, a great challenge to humanity as a whole.

You people in the state of Michigan do not quite realize what a reputation this state has earned outside of its own borders. You are looked upon as probably the most advanced state, educationally and sociologically combined, of any in the Union. How did you get that reputation? You got it by allowing your professions the right to be educated and by

giving them a freedom of activity which was their right. You will continue in your leadership as long as you have the courage to stay there, but the race is getting harder. I don't mean the competition from other states, I am not worried about that; the more of them that progress, the happier we shall be as a people. I mean that the competition from inside of yourself, from your material surroundings is getting harder all the time; there are more newspapers with an individual point of view to control your independent thinking and wipe it out of existence; more industries with material wealth trying to ensnare you, trying to catch you and kill your idealism. Don't let it do that. The people who came out here and founded this state, who gave you the first clearly active state institution of higher learning, mean something in your life. They mean an ancestry to the social background of this state that ought never to be forgotten.

As I see it, there never was a time in the history of mankind when the intelligent effort of a profession was more needed than at the present time. Your chairman was kind to call me sincere. As I see it, I do not stop to think whether I am sincere or not, all I know is that never before have I realized the full beauty and value of human life to the extent that I do at the present time. Never have I realized the obligation that goes with being a citizen of a democracy. It is not any easy job; you can "loaf" on it and you can "get by," as I said earlier, but you can't be a good citizen and a growing citizen unless you work and unless you suffer. It is for that work and suffering, as I see it, that we are all called at the present time. It is not going to be an easy future for this country of ours, no matter what we do for it; it is going to be an almost impossible future if we do not allow courage and clearness of vision and honesty to shape whatever action we attempt. In that effort and in the belief that the medical profession of this state is going to be a leader in that respect, I feel confident that the state of Michigan will never go backward in those matters, that it will never allow a matter of personality here or personality there to sway it from the proper purpose. If and when in a position of authority within your state, whether it be political, educational, religious or professional, a man or men stand in the way of clear vision, honesty and courage, get rid of them as fast as you can, it makes no difference where they are. As I say, in the belief that the medical profession of this state stands on a firm foundation and is going to assume the leadership in courageous social thinking, I feel very happy and I thank you all tonight for listening so attentively to what I have had to say.

SURGERY OF THE TUBERCULOUS*

IRVIN ABELL, M. D., F. A. C. S.

LOUISVILLE, KY.

The widespread prevalence of tuberculosis and the fact that no organ in the body is immune to attack by it serves as an explanation of the selection of surgery of the tuberculous as a topic for discussion before an audience comprising all sections of your Society. Surgery of the tuberculous lungs, bones and joints has been intentionally excluded. The remainder of the subject may be conveniently considered under three heads or groups:

1. Surgery done for the relief of tuberculous lesions in patients presenting no demonstrable pulmonary involvement.
2. Surgery done for the relief of tuberculous lesions in patients presenting pulmonary tuberculosis.
3. Surgery done for relief of non-tuberculous lesions in patients presenting pulmonary tuberculosis.

For the purpose of discussion the records of 145 patients operated on for the relief of tuberculous lesions, and falling in groups 1 and 2 have been examined. They show a distribution of tuberculosis as follows: Cervical lymph nodes 57; uterus, tubes and ovaries 17; appendix 4; peritoneum 32; kidney and ureter 21; testicle and epididymis 11; breast 2, and tendon sheath 1. A family history of tuberculosis was obtained in 29, or 20 per cent. Active disease existed in two or more systems or organs in 26, or 18 per cent, while in 120 it presented as the so-called primary surgical tuberculosis. In its surgical aspect it is essentially a disease of early adult life, the average age of 145 patients being 30.7 years, youngest 3, oldest 62.

GROUP I.

Surgical Tuberculosis Without Demonstrable Pulmonary Lesions—The accepted routes of entry are the tonsils, respiratory and gastrointestinal tracts, and the types of bacilli are the human and animal, notably bovine and avian. Where no direct connection can be established between one of these avenues of entry and the site of the tuberculous disease, it is assumed that mucosal entrance with lodgement in the adjacent lymph nodes has occurred with arrest or quiescence in these situations. In this connection the report of Bugge is of much interest. He was able to demonstrate the presence of tuberculosis, healed or quiescent, in the bronchial lymph nodes in 75 per cent of the bodies coming to autopsy, in which during life no evi-

dence of the disease had been detected. Systems of lymph nodes most commonly involved are, in the order of frequency, the bronchial, cervical, mesenteric and retroperitoneal. Granting the presence of tuberculous infection in such nodes the involvement of various organs may then occur by way of the blood stream or through the intercommunication of the various lymph systems by means of the anastomoses which exist along their margins, an autogenous or endogenous infection—reinfection. This emphasizes one practical point ever to be borne in mind when dealing with surgical tuberculosis, namely that it is always secondary to a focus located elsewhere in the body, even though such focus eludes detection. In our own experience the X-ray has not infrequently shown evidence of a healed pulmonary lesion, when the history and physical examination of the patient gave no grounds for suspicion as to its existence other than the presence of a surgical tuberculous lesion, the presumable origin of which was thereby made inferentially clear.

The chief problem presented by patients falling in group 1 is largely one of diagnosis, since if an extrapulmonary lesion exists, and accumulated experience has demonstrated the efficiency of surgical treatment in such, evaluation of the patient's physical condition and the extent of the lesion determine the character and the extent of the treatment. This latter may be postulated as wide resection of diseased tissue with or without subsequent irradiation as location and extent of lesion may indicate.

The choice of anesthetic in the first group does not demand the same consideration as in the second and third, and while local ether by inhalation and by rectal administration, and gas oxygen have been employed in the present series, local and gas-oxygen anesthetics have latterly been given the preference for reasons to be mentioned later.

GROUP II.

Surgery Done for Relief of Extrapulmonary Tuberculous lesions in Patient Exhibiting Pulmonary Tuberculosis—It would seem at first glance that the employment of surgery in such cases is contra-indicated, yet it is logical to assume that the cure or arrest of an early pulmonary tuberculosis may be made possible by the removal of an advanced deposit elsewhere, the combined effects of which if left alone would form a load greater than the patient could carry. The lesions in which we have thought it wise to do this involved the peritoneum, appendix, tubes, kidney and testicle. The employment of surgery in such cases has been limited to those in which the patients came

* Read at 106th Annual Meeting Michigan State Medical Society Lansing, September 1926.

under observation with the pulmonary tuberculosis in an early stage, the distant lesion of surgical character, and in most of the cases so treated has been in a rather advanced stage. The removal of a pyonephrotic kidney, from which toxin absorption is both depleting the patient's vitality and giving rise to a toxic nephritis of the opposite kidney, will give such a patient the only possible opportunity of arresting the pulmonary lesion. Not that such a procedure will give a good result in every case, but its possibilities are such that the patient should be given the opportunity to make use of them. The same holds true of peritoneal, testicular, tubal and appendicular involvement. To determine the fitness of a given patient for such treatment involves a careful study of the general condition, the pulmonary and local lesions; always substandard, advantage of every factor for safety should be taken with such patients. In preparation for operation, rest, food and blood transfusions are of the utmost importance. The operative procedure involving the least trauma, manipulation and time of effort should be selected. Notwithstanding the repeated assertion that ether does no more harm to the tuberculous lung than it does to the healthy lung, it causes sufficient irritation to be potentially harmful in every case, consequently local and gas-oxygen anesthesia, alone or in combination, has been given preference. The increase in blood pressure incidental to the administration of gas-oxygen theoretically predisposes to pulmonary hemorrhage. In practice I have never seen this occur, but bearing its possibility in mind prefer to use local anesthesia, with, when necessary, the addition of sufficient gas-oxygen to tide over such part of the operation as can not well be carried out with local alone.

Cervical Lymph Node—Of the 57 patients presenting a localization of the disease in this system, 43 were females and 14 were males; the youngest was 3, the oldest 57; two were in the first, nine in the second, 20 in the third, 11 in the fourth, eight in the fifth, and seven in the sixth decades. The involvement was bilateral in 6, unilateral in 51. The operative procedures consisted in excision or incision of abscesses in 6, excision of the nodes in 45, 6 bilateral and 39 unilateral; in the earlier cases block dissections were done, in the later ones removal of the enlarged nodes with subsequent irradiation has been the procedure of choice; in 5 with pulmonary and 1 with vertebral coincident involvement irradiation alone was employed. The pathology presented, while always characteristic of the various stages of tubercle, varied from discrete nodes of moderate enlargement to massive, matted groups, and from solitary absces-

ses to those presenting multiple foci of softening with one or more sinuses. When localized to one group, the submaxillary has been most frequently affected and next the deep carotid; not infrequently the nodes of both triangles showed rather extensive involvement. The diagnosis at times quite apparent, at others requires to be differentiated from that of hyperplasia noted with long standing oral and tonsillar infection, syphilis, lymphatic leukaemia, Hodgkin's Disease, lympho-sarcoma and metastases from malignant growths. The history and physical examination of the patient with the conformation and character of the local enlargement plus the blood analysis will suffice in most instances to distinguish between these, while in others the removal of a node for microscopical examination is necessary to the correct solution. Granted the diagnosis, which is the best treatment? It is agreed that a dietary, hygienic regime is advisable in all forms of tuberculosis. In infants and young children such a regime with the addition of irradiation offers the best results. The advocates of irradiation claim that tuberculous cervical lymphnoditis is no longer surgical, that all cases are curable by such treatment. The writer still believes in the excision and incision of abscesses and the removal of enlarged nodes on the basis that the ablation of massive foci at once relieves the patient of a definite burden and thereby affords greater opportunity for upbuilding resistance. The post operative employment of irradiation is decidedly advantageous in that sinuses and further node enlargement are as a rule obviated and since adopting its employment recurrences have been reduced to a minimum.

Uterus, Tubes and Ovaries—Of 17 women with tuberculosis of the pelvic genital system two had demonstrable disease in the lung. Their ages varied from 19 to 62, average 33.6 years. The disease occurred in the tubes in 8, tubes with miliary involvement of pelvic peritoneum in 1, tubes and appendix with miliary involvement of the pelvic peritoneum in 1, as an ovarian abscess in 3, and in the endometrium in 4, 1 with fibromyoma, 1 as a pyometra, 1 with the tubes, and 1 with the tubes and one knee joint. The operations consisted of a removal of tubes and appendix in 10, tubes, ovaries and appendix in 3, panhysterectomy with appendix in 2, hysterectomy and appendix in 1, and vaginal hysterectomy in 1. In the latter instance, a woman of 62 had suffered with a prolapse of the uterus for years, which shortly before coming under observation had become painful; at operation a pyometra was found which upon microscopical examination proved to be tuberculous. It is interesting to note that one of her children recently reported with tuberculous

cervical lymphnoditis. The pre-operative diagnosis of tuberculosis of the female pelvic organs is by no means easy, particularly in the absence of other recognizable foci. In none of the 4 showing involvement of the endometrium was the diagnosis made prior to operation, then only 2 in which the character of the accompanying tubal disease was unquestioned, while in the remaining 2 it was first made in the laboratory. In the ovarian abscesses the diagnosis was made in none before operation, in 1 at the time of operation, and in the remaining 2 the character of the disease was first recognized by the laboratory. All three of these occurred in married women, all showed a secondary pyogenic infection and in all three the pelvic mass was assumed to be a suppurative salpingo-oophoritis of pyogenic type. Tuberculosis of the ovary is comparatively rare, particularly when unassociated with similar disease in the tubes; it is ordinarily unilateral, while tubal tuberculosis is commonly bilateral. The recognition of the latter, with a family or personal history of tuberculosis to direct ones attention to it may not be difficult; or in virgins presenting masses in the tubal regions with the accompanying menstrual and pelvic distress the probability of tuberculous salpingitis suggests itself. In the absence of virginity, while one may readily recognize the presence of tubal disease, a determination of its tuberculous character is not so readily at hand. When one bears in mind that approximately 50 per cent of tubal disease follows in the wake of pregnancy, interrupted and full term, 30 to 35 per cent in the course of gonorrhoea, 5 per cent being due to accidental contamination and 10 to 15 per cent to tuberculosis, the difficulties of a differential diagnosis become apparent. Reliance must in large measure be placed upon a careful analysis of the patient's history, realizing that when a family or personal history of tuberculosis is lacking, when no focus of the disease is discoverable elsewhere and when virginity is absent, the correct diagnosis will usually not be determined until the tubes are exposed to view; this is more particularly true if a secondary pyogenic infection has been grafted on the tuberculous one. Since the treatment offering the greatest chance of relief is the removal of the tuberculous foci occurring in the pelvic organs, after all, the most important element in diagnosis is a recognition of surgical sufficiency early to give such patients the chance which ablation of such foci offers.

Peritoneum—Of 32 patients with tuberculous peritonitis, 10 were males and 22 were females; the youngest was 10, the oldest 53, average age 30.3 years. These may be conveniently subdivided into 3 series, one in which recovery might be expected, one in which intestinal ob-

struction was a complicating feature, and one in which intestinal fistulae had followed operations elsewhere. In the first series there were 8 males and 16 females; in 1 male the appendix, and in 7 females the tubes could be demonstrated as distinctly tuberculous and inferentially the starting points of the peritonitis and were removed; in the remaining 16 these organs either could not be visualized or were found free of disease other than the miliary tubercles in their peritoneal coats, the operation consisting of incision and evacuation of ascitic fluid. Early pulmonary lesions were present in 3. The second series comprised 5 cases of advanced adhesive peritonitis with obstruction; an enterostomy was done in 2, an ileo-colostomy in 1, and 2 presented such extensive intestinal matting that nothing was done other than the exploration; 2 died in the hospital, 2 within a year, and 1 is still living 10 months after operation. The third series consisted of 3 females who had had pelvic operations elsewhere followed by intestinal fistulae; at operation it was found that the tubes of all three had been removed and that localized pelvic peritonitis with fistulae were present; resection of the intestinal segments in which the fistulae were located was carried out with cure of the fistulae in two and a recurrence of the fistula in 1. The pathology has varied with the stage at which the disease was observed; miliary tubercles with ascites, no adhesions, both with and without disease in the appendix and tubes; adhesive peritonitis with ascites, in some instances the adherent coils of intestine and omentum so walling off the fluid as to give it the physical signs of a cyst rather than an ascites; fibrous peritonitis with caseation; and localized abscess in tubal or appendicular region with miliary tubercles scattered over the peritoneal surface. The diagnosis in the ascitic type depends on the presence of the fluid, mild fever, absence of leucocytosis, progressive loss in weight, secondary anemia and the exclusion of the heart, liver and kidney as causative factors in the production of the ascites. This picture is not incompatible with abdominal malignancy, especially as patients approach the cancer age; a distinction can usually be made between the two by removing the ascitic fluid when palpation of the abdomen will reveal the malignant growth. At times the agglutination of intestine and omentum is such as to prevent one feeling confident of his ability to tell one from the other by such palpation, in fact, I confess that with the abdomen open I have at times been unable to say whether the pathology represented a peritoneal tuberculosis or a diffuse abdominal carcinosis, having to defer to the microscope the final decision. Neither is it always possible, with the abdomen open, to lo-

cate the lesion from which the peritonitis sprang; we know that it is always secondary to some other focus and that if this latter is within the abdomen the patient's chances of cure are greatly increased by its removal; mesenteric and retroperitoneal nodes, the tubes, the appendix and the bowel, notably the caecum, are the common points for such origination and where visualization is not prohibited by intestinal matting should be examined and such of them as lend themselves to such procedure should be removed when found tuberculous. Whether or not such a focus is found and removed the rationale of the cure of tuberculous peritonitis by operation is not clear; the evacuation of a fluid of low bactericidal power with the substitution, by exudation of a fluid with a high bactericidal power, the relief of tension, the entrance of air into the abdomen, all have been suggested, but are inadequate for a logical explanation. In any event surgical treatment offers a 75 per cent cure or arrest of the disease in this membrane. In view of the beneficent effect of irradiation observed in tuberculous lymphnoditis, it was used as a postoperative adjuvant in one case subjected to operation one year ago: a woman, 42 years of age, with ascites and extensive intestinal and mesenteric matting filling the pelvis and part of the abdomen, preventing visualization of appendix and pelvic viscera, was treated by evacuation of fluid through incision and later deep X-ray therapy over abdomen. Palpation now reveals a soft, flaccid abdomen with no masses, she has gained 40 pounds in weight and, with the exception of the nervous symptoms of the menopause induced by the irradiation, is symptomatically well. Such an experience would suggest further study and investigation into the propriety and possibilities of deep X-ray therapy in similar cases.

Kidney—Of 21 patients with renal tuberculosis 9 were males and 12 females. Ages 19 to 55, average 32.3 years. In 8 the left kidney and in 13 the right was involved. A pulmonary lesion was present in 3, 1 gave a history of leg amputation for disease of knee joint, and 1 of removal of the testicle for tuberculosis four years before. Vesical irritability has been the most commonly noted initial symptom, although entirely absent in 2. The irritability apparently bears no relation to the degree of renal involvement, being severe in some instances of moderate renal disease and mild in others with extensive renal destruction. The urinary signs consist of pyuria and hematuria, the former slight at first, but practically always copious in the later stages, the latter intermittent or continuously microscopic, rarely of large or even moderate amount. While an acid, purulent urine containing no pyogenic organisms strong-

ly suggests tuberculosis, the presence of such organisms by no means excludes this disease, since sooner or later in its course a mixed infection is responsible for their constant appearance. Colic has been infrequently noted and then of mild intensity and duration; in some a total absence of pain referable to the kidney, in others a dull ache in the loin was present. The general condition varied with the stage at which the disease was seen; renal tuberculosis is essentially chronic and in the vast majority of cases is unilateral in onset. In two patients presenting bilateral disease at the time of coming under observation and which the writer had opportunity of following, one died at the end of the eight years from meningitis, the other at the end of six years from renal deficiency plus sepsis. If seen early in its course the general health will not have greatly depreciated, while with the onward course of the disease there is a gradual loss in weight, lowering of vitality, and progressive anemia. When the local lesion assumes a pyonephrotic type the mass can usually be palpated, otherwise palpation frequently gives little or no information other than the elicitation of tenderness on deep pressure. It is conceivable that with the atrophic changes and destruction of the involved kidney in the absence of retention, the healthy kidney may be the larger of the two due to compensatory hypertrophy incidental to its assumption of double function. I have never observed but one instance of autonephrectomy in renal tuberculosis. The patient, a male, age 42, was seen in the last stages of anuria and the history obtained that the left testicle had been removed for tuberculosis 20 years before. Autopsy revealed the anuria to have been due to a calculus obstructing the ureter of the right non-tuberculous kidney and the left kidney to be represented by a small nodule of tissue presenting the pathology of tuberculosis and containing but microscopic amounts of renal parenchyma. While the diagnosis may be strongly suspected from the history and physical examination it after all rests with the cystoscope and the laboratory. The X-ray in showing the size and shape of the kidneys and at times the presence of calcified areas easily distinguishable from calculi is of minor assistance. The cystoscope reveals pictures within the bladder varying from normal through the sundry stages of toxic cystitis to definite infiltration and ulceration, diminution in its distensibility and more or less characteristic changes at and around the ureteral orifice, presenting to the skilled examiner significant evidence. A study of the two kidney urines with a differential phthalein functional test gives the information upon which the decision for operation must be based. The bacilli can be usually, but not in-

evitably, found upon repeated smears of the centrifugalized urine. While the guinea pig inoculation test was employed in the earlier cases of this series it has been discarded in the belief that the needed data can be obtained by the above outlined routine. A correlation of the various tests with a judicious employment of that most valuable attribute, judgment, is essential to a correct solution. Tubercle bacilli may filter through the kidney without causing disease therein; the writer has had the mortification of removing a kidney from a patient who gave a history of amputation for tuberculous joint disease and who showed tubercle bacilli, pus and blood in her right kidney urine, only to find that the microscope failed to reveal any evidence of tuberculous disease. The verdict for operation should be based upon the finding of tubercle bacilli, pus, blood and a definite impairment of renal function on one side with, so far as ascertainable, an absence of tuberculous disease on the opposite side. The urine from the presumably healthy kidney not infrequently shows the presence of albumen and pus, the interpretation of which may be equivocal, either toxic in origin or indicative of beginning tuberculous disease. Knowing that while the disease is almost invariably unilateral in its onset it sooner or later affects the second kidney, it behooves one under like circumstances to go slowly, to repeatedly examine such urine for bacilli and to be assured of a lack of renal deficiency. In the event that tuberculosis should develop in such a kidney after removal of its fellow of the opposite side, one would at least have the consolation of having exercised the precautions which our present day knowledge affords. The belief is expressed that nephrectomy should not be undertaken upon the finding of bacilli in a kidney urine even with the presence of microscopic pus and blood when there is no impairment of renal function; such findings represent bacillary filtration or a beginning tuberculosis, in either event a dietary, hygienic regime is the treatment of choice. Again in the very late cases, as well as those exhibiting bilateral involvement, nephrectomy is futile and should not be attempted. Between these two extremes the disease often reacts kindly to nephrectomy, the bladder lesions heal, discomfort and distress are relieved and improvement in general health is made possible.

Testicle and Epididymis—The disease was located in the male genital tract in 11 patients, age 17 to 44, average 28.1 years. In 6 of the 11 distant foci of the disease were present. In 6 the testicle was involved with the epidymis and both, with the vas, were removed; in 2 of these the castration was done as a palliative measure on account of abscess formation, both showing renal involvement; in 2 the prostate

and vesicles were palpably nodular, both dying within 3 years, 1 from pulmonary and 1 from miliary tuberculosis. In 5 in which the testicle was apparently free, epididymovasectomies were done; 1 of these returned 4 years later with a localization in the kidney. The diagnosis of tuberculous epididymitis is based on the insidious, painless nodulation developing therein in the absence of the ordinary posterior urethral and prostatic infections; tuberculosis may develop in the presence of the latter and, contrarywise, such infections may give rise to an indolent epididymitis of inflammatory character which greatly simulates the tuberculous type. The vas may be beaded in both, but most frequently so in the tuberculous. If the condition is bilateral, if there has been a prior orchidectomy for similar disease, if scrotal sinuses are present of a duration of more than 1 month the lesion is most probably tuberculous; finally, if tuberculosis is present elsewhere, and it is in approximately 50 per cent of cases, the diagnosis is at hand. There has been much discussion as to the primary starting point in male genital tuberculosis; it has been held that it was most frequently a blood borne infection with localization in the epididymis, extending from there up the vas to the prostate, seminal vesicles and in a large percentage of cases down the opposite vas to the opposite testicle. On this belief such operations as described above have been predicted. At first orchidectomy was practiced; noting the frequency with which the second testicle became infected epididymo-vasectomy was resorted to with the aim of saving the testicle with its internal secretion. The fact that once established in the genital tract it progressively involved other portions and also showed marked predilection for extension into the urinary system led Young and others to a detailed study of the situation. The conclusion he has reached is that the primary site of genital tract disease is, in practically all instances, the seminal vesicles, from which point it progressively extends, involving both genital and urinary system. He has devised an operation for the removal of the vesicles, lobes of the prostate, both vasa deferentia and both epididymes, which, while radical, offers the hope of removing the local disease entire.

Appendix, Breast and Tendon Sheath—There were 4 cases of tuberculous appendicitis, all occurring in young patients with pulmonary disease, the removal of the appendix being undertaken to secure relief from discomfort and continued digestive disturbance. The two patients presenting tuberculosis of the breast, 37 and 42 years of age, showed no distant focus: in one the axillary nodes were infected, in the other not. One presented a discharging sinus.

in the other the skin was intact. The breast was amputated in both with axillary clearance of infected nodes in one. Involvement of the synovial sheaths of the flexor tendons at the wrist was noted in a man of 50. Extensive dissection gave an apparent cure with recurrence at the end of 6 years. A second operation followed by irradiation was carried out with again an apparent cure which up to this time, now two years, still persists.

The primary or operative mortality in the 145 patients was 8 or 5.5 per cent. I regret that lack of a complete follow up prevents my giving you the ultimate results. The belief, however, gained from known results warrants the belief that surgery in these two groups is well worth while for the relief of symptoms and the prolongation of life.

GROUP III.

Surgery Done for the Relief of Non-Tuberculous Lesions in Patients Presenting Pulmonary Tuberculosis—The choice of anesthetic for all patients falling under this classification is the same as for group 2, namely local alone, or as needed, in combination with gas-oxygen. The surgical emergencies such as perforating gastric and duodenal ulcers, acute appendicitis, ruptured tubal gestation, fractures, etc., do not permit of discussion; granted that the pulmonary tuberculosis has not reduced the condition of the patient to a point that he or she is in extremis, such urgent lesions should receive the surgical treatment otherwise accorded them. It is the elective cases that demand our study, morbid states such as chronic gastric or duodenal ulcers, chronic cholecystitis, and appendicitis which by interfering with digestion hinder nutrition; fibromyomata which induce anemia through blood loss; pelvic inflammatory disease which lowers vitality through suffering and the absorption of toxins; prolapse of the uterus of such degree as to inhibit normal activity; toxic goitre, hernia, hemorrhoids and a host of ailments which by adding to the load which patients with pulmonary tuberculosis must carry indirectly retard their recovery. The factors to be considered in determining the advisability of operation in such are threefold:

- a. Extent and activity of the pulmonary disease.
- b. Extent, character and harmful influence of the non-tuberculous lesion.
- c. Whether or not the proposed surgical procedure is within the realm of the patient's endurance and, granting such, whether or not one may reasonably hope to improve the patient's chance for recovery or arrest of the pulmonary disease by eliminating the non-tuberculous lesion.

INDICATIONS AND CONTRAINDICATIONS FOR OPERATION IN CASES OF DUODENAL ULCER*

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Before any opinion is expressed on what plan to follow in the treatment of duodenal ulcer it may be well to consider some of the fundamental facts regarding the condition. In the first place it is well known that ulcerations in the duodenum are benign, in this respect differing from similar lesions in the stomach. Necropsy specimens and clinical records have been examined repeatedly in the clinic for evidence of primary cancer of the duodenum, but each review has brought the same conclusion, that cancer does not start in the first part of the duodenum. In the case of ulcer of the stomach it is impossible to determine without microscopic study whether the ulcer is benign or malignant; furthermore, there is considerable evidence to show that a gastric ulcer may start as benign and change to malignant. Therefore, it has always seemed to me that gastric ulcers are essentially surgical lesions from the beginning but, since duodenal ulcers are benign, there is no objection to carrying out any sort of conservative treatment that offers a prospect of relieving the symptoms and curing the disease.

Some years ago I called attention to the occurrence of two distinct pathologic lesions in the duodenum either of which may be found where there is a characteristic history of chronic peptic ulcer. The first is the true ulcer which is recognized by congestion and stippling of the serosal surface with more or less formation of scar tissue and adhesions and deformity of the duodenum. The wall of the bowel is always indurated in this type and a tumor may be formed as a result of the defensive reaction of the surrounding tissues, if the ulcer has slowly perforated the bowel. When the intestine is opened a crater-ulcer is seen. A second type of lesion is one which we have called duodenitis or submucous ulcer in which there is congestion and stippling of the serosa but little or no induration. Palpation of the duodenum is negative and when the bowel is opened no lesion of the mucosa can be found or at most only one or more superficial small mucosal abrasions. These might be considered healed ulcers were it not that the congestion, edema and stippling and the presence of symptoms constitute evidence of some pathologic process going on in the intestinal wall. Microscopic examination reveals little or no abrasion of the

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mucosa, but the submucosa and at times the muscle layers are infiltrated with lymphocytes. Often there is a tendency to circular constriction of the bowel in these cases, but it is difficult to determine whether this is due to spasm or true narrowing. Clinically there is little if any difference between the two types. The roentgenogram shows spasmodic deformity in both lesions. That duodenitis is not a stage from which true ulceration invariably develops is shown by the fact that the average duration of symptoms in the two lesions is about the same. The terminology has no bearing on the clinical diagnosis or treatment. MacCarty has reviewed 97 excised, localized, inflammatory duodenal areas and has found that the pathologic picture of duodenitis is cellular destruction with congestion, edema, migration of polymorphonuclear leukocytes, lymphocytes and endothelial leukocytes. The lesion may be localized or diffuse.

The recently advocated treatment of duodenal ulcers by extensive resection of the first portion of the duodenum and pyloric part of the stomach has led to interesting pathologic findings. Konjetzny finds that in all cases of gastric and duodenal ulcer there is more or less extensive gastritis and duodenitis. He found it present in 22 cases of duodenal ulcer. All stages of superficial ulceration are seen varying from tiny abrasions to ulcers of appreciable size. Strauss in his resected specimens also found the entire duodenum to the point of resection infiltrated with lymphocytes, plasma cells and eosinophiles.

That duodenitis is a primary process is borne out by the long history. A relationship exists between duodenitis and chronic ulcer; however, according to Konjetzny, chronic ulcer forms as the result of unknown mechanical factors on the basis of chronic duodenitis. The importance of the acid factor is still undetermined. The etiologic factors of duodenitis are not known. The pathologic findings in duodenitis call attention to the work of Rosenow as the condition found closely resembles lesions produced by him in animals by injecting specific strains of streptococci. It is an interesting observation that this duodenitis type of lesion is the one that always results from the experimental production of ulcers following the bacterial invasion of the blood stream. The only difference is that the experimentally produced lesions heal promptly while those that we have observed in man are chronic. It is very unusual to be able to produce a chronic ulcer by injecting the blood stream with ulcer strains of streptococci. Contrary to this, however, are the ulcers that are produced experimentally by duodenal drainage. A factor in the production of these ulcers would seem to be a change in the physiologic

processes. The ulcers are invariably chronic, have a definite crater and are in every way similar to the true ulcers seen at operation. Whether the inflammatory lesion is the result of infection and the true ulcerous lesion the result of disturbed function has not been determined.

In this paper dealing with the indications for and the contraindications to the surgical treatment of ulcer of the duodenum it is worth while to consider seriously these different lesions. It would seem as though eradication of foci of infection and general measures with a dietary regimen would offer a good prospect of healing a localized area of inflammation in the duodenum. The fact that such a lesion does frequently exist without true ulceration lends support to medical management in certain of these cases.

Of the definite indications for surgical treatment in these cases, we first think of perforation. We are all agreed that in the presence of acute perforation operation must be performed immediately. In certain other cases there seems to be a chronic perforation or a slow leak or penetration of the duodenal wall. These cases can usually be recognized by the severity of the pain. If the pain is intense and requires an opiate at times to relieve it, I believe that the safest plan is to operate. Regarding the question of hemorrhage in these cases there is some difference of opinion. Hemorrhage usually occurs suddenly and acutely. It is not unusual to have it come on when there have been no other signs of ulcer. Some of the European surgeons, Finster especially, are inclined to feel that resection of the stomach should be performed as an emergency operation in the cases of acute hemorrhage, and have quoted statistics to show that their results are better than have been obtained by conservative measures. My experience in cases of hemorrhage leads me to follow the conservative plan of keeping the patient quiet with an occasional dose of morphin, and ice caps on the abdomen. In this way he will usually come through the emergency safely. I believe it is a mistake to try to hurry the case by transfusions and intravenous medication; too often this results in a recurrence of the bleeding. I have felt that it was not necessary to operate because of one hemorrhage from such ulcers; I have seen a number of cases in which there was no recurrence of the trouble. If the hemorrhage does recur, surgical treatment is definitely indicated at a time when it can be safely carried out. If operation is undertaken in a case of hemorrhage, it is best to remove the ulcer because in a certain percentage bleeding recurs even after gastro-enterostomy.

The indication for operating for chronic dys-

pepsia resulting from an ulcer of the duodenum depends on several factors. If the symptoms have been going on for a long time and especially if several periods of good dietary regimen and medical management have been instituted and trouble still continues, I see no occasion for postponing operative treatment. If the symptoms have existed for a short time only, and no treatment has been instituted, it may not be wise to operate. There is plenty of evidence to show that ulcers do heal spontaneously and also that dietary management, started before the case becomes chronic, may result in complete relief from symptoms and probably in healing the ulcer. In any case of duodenal ulcer, diet should be tried conscientiously before operation is resorted to. Most of them provoke no symptoms during treatment. Only occasionally will one of them perforate during the time of rigid treatment. It is a great mistake to continue dietary treatment if nothing is being accomplished by it, and if the symptoms return as soon as there is the least indiscretion. About 65 per cent of the patients with duodenal ulcer who enter our clinic undergo operation. This implies that in many cases, duodenal ulcer even though chronic, runs a mild uncomplicated course. Medical treatment may be carried out and operation eventually resorted to if the result of the treatment or the co-operation of the patient is unsatisfactory.

The age of the patient should be taken into consideration; if a young person has mild symptoms of short duration, dietary regimen should be carried out for a considerable time. The severity of the symptoms in any case will help to determine what plan to follow because, if there is a constant tendency to perforation or bleeding or severe gastric upsets which are not relieved quickly by diet, operation is indicated. Nervous tendencies and the race of the patient should be taken into consideration also. Persons with a highly sensitive nervous system do not bear any gastric operations well. A higher percentage of Jewish people seem to have ulcers. They are likely to be of a severe type and any type of gastro-intestinal anastomosis may be followed by jejunal ulcers. If these high-strung, nervous patients can be kept at all comfortable by any form of diet and medical management, I believe that this is indicated rather than surgical measures.

Duodenal ulcer is a common ailment. Between 1,200 and 1,500 patients with this disease are seen in our clinic every year. Roentgenographic statistics show that duodenal ulcer is nine times more common than ulcer of the stomach. The average duration of symptoms at the time these patients are seen has been about nine and one-half years. In most instances beginnings are mild and there are long

intervals of relief. In about 35 per cent of all cases the usual complications are manifested, such as recurrent hemorrhage, obstruction of varying degree and perforation. In only about 37 per cent of our patients was the disease diagnosed before admission. The results of surgical procedures in the very obese patients with duodenal ulcer have not been entirely satisfactory and we consider that obesity as well as active pulmonary tuberculosis, diabetes, or serious renal or cardiovascular disease contraindicates operation. In cases of active tuberculosis in which dieting is not successful, we have operated with very satisfactory results. Women as a rule co-operate better than men and the results of treatment are better. The exact medical treatment sometimes helps in the differential diagnosis, serving as a so-called therapeutic test. Operation is indicated in the cases in which there is evidence of an associated extragastric lesion. In many of the cases of duodenal ulcer cholecystitis with stones and appendicitis are associated and demand prompt surgical treatment. In uncomplicated cases, especially those of long standing, patients may personally prefer operation. Some of them reach the point where the diet is unbearable; others, for economic reasons or inability to obtain or follow out medical management, will require surgical treatment.

Just what we accomplish by the different forms of treatment in cases of duodenal ulcer will not be definitely known until we learn more of the etiology. The opportunity in the last few years to study the stomach and duodenum in the cases in which resection and excision have been carried out may help in this respect. Much attention is being given to the inflammations in the stomach and duodenum, both in association with ulcer and independently of any sign of ulceration. Undoubtedly these lesions may exist for a short time and then heal and leave a scar as the only evidence of disease. Many scars of healed duodenal ulcers are found by those who make a routine of looking for them at necropsy. Gastro-enterostomy results in healing, although not in every case. I do not believe that the great wave of enthusiasm for resecting the stomach in cases of duodenal ulcer on the basis of the physiology of acid secretion will last very long. Gastro-enterostomy is not an entirely satisfactory procedure because in a certain percentage of cases ulcers form. The best type of operation for duodenal ulcer is one that removes the ulcer and puts the pyloric sphincter at rest.

Unfortunately we have no accurate statistics showing the result of the medical treatment of duodenal ulcer. As nearly as we can estimate, surgery offers more than a 90 per cent chance of complete and permanent relief from symp-

toms. Operative treatment is definitely indicated in cases of duodenal ulcer after a fair trial of medical treatment has failed, and in all cases in which symptoms are severe whether or not the conservative treatment has been tried. Operation is not indicated in the more recent cases progressing favorably on medical management nor in cases in which associated disease increases the hazard of operation if the patient is being kept reasonably comfortable on dietary treatment.

DISCUSSION OF DR. JUDD'S PAPER ELMER L. EGGLESTON, M. D.

In attempting a discussion of any phase of the peptic ulcer problem, I am mindful of the words of a man who, because of his early recognition of duodenal ulcer, was able to arrive at an accurate diagnosis based on clinical symptoms alone. To have such definite understanding of the condition in the absence of the valuable aids to diagnosis which are at our service today would certainly entitle him to a position not attained by later observers. I refer to Sir Berkley Moynihan who has expressed himself as follows:

"The literature on this subject is already formidable in volume, but unhappily its value is by no means proportionate to its bulk. The foundations of most of it are unsound.... We have come into a deceptive inheritance; a large part of which we thought was gold has proved to be tinsel, the authority of a great name alone bestowing any interest upon it. Here at least we may agree with Damascenus that 'without exquisite knowledge, to work out of books is most dangerous.'"

A review of the recent literature only dealing with this subject would bear witness to the truth of this statement, but it may also be indicative that the problem of peptic ulcer has not been satisfactorily solved, either with reference to etiology or therapy. Had either the surgeon or internist perfected a therapeutic method giving satisfactory results in practically all cases, at least one phase of the discussion would have been eliminated.

.... Dr. Eggleston read his discussion on Dr. Judd's paper (Paper No. 7), with the following interpolations:

Interpolation No. 1: I am very sure that the matter of duodenitis is certainly a precursor of many cases of duodenal ulcer, and it is very possible that dietetic indiscretions may in this way be explained as causative factors in the production of chronic ulcer.

That the disease is one for the internist early in its development is unquestioned. The matter of early diagnosis is entirely his responsibility and it is in his province to direct the early treatment when definite surgical indications are lacking. Concerning this I quote further from Sir Berkley Moynihan as follows:

"I think it is a reproach to medicine that the surgeon should be compelled to operate so frequently for gastric and duodenal diseases. Such ulcers ought surely to be cured, far more often than they are, by medical treatment. Physicians who acquaint themselves with the pathology of a living gastric or duodenal ulcer realize how protracted and how scrupulous the medical treatment of so grave a lesion must necessarily be."

It is most unfortunate that either the physician or surgeon is compelled to treat *chronic* cases of peptic ulcer. An early diagnosis of the acute ulcer with appropriate and thorough treatment would probably provide a cure in a very large percentage of cases. A review of the histories of more than a thousand cases

coming under our observation subsequent to the use of accurate diagnostic methods, reveals the fact that the average duration of the trouble was more than seven years. A great many of the cases had never been treated symptomatically as cases of vague indigestion or hyperchlorhydria. Because the ulcer patient, early in the development of the trouble, is not incapacitated and since his symptoms are relieved so easily, the trouble is likely to be considered of small consequence by his physician. A rigid diet is not prescribed nor is complete rest insisted upon with the result that the relief obtained by alkalis is temporary only and with repeated attacks there develops pyloric stenosis, a dilated or hour glass stomach, with the possibility of hemorrhage and perforation—conditions demanding, in most cases, surgical intervention.

Interpolation No. 2: I hope you won't think for a moment that the internist of today is antagonistic to the surgeon in the treatment of duodenal ulcer; certainly such is not the case. There are extremists both among the surgeons and among the internists. There are those who say once the ulcer has been diagnosed it is a surgical case. One very prominent surgeon was so free to express himself as to say that the internist having made a diagnosis of ulcer is no longer an internist, he is an infernist. Possibly so, but we hardly believe that the condition is so serious as all that.

It is an unfortunate reflection on our profession that a condition that can be so accurately determined with the facilities at hand, should be allowed to drift for years undiagnosed.

Interpolation No. 3: Although very frequently the patient who comes to my office gives a very classical history of ulcer so it seems a diagnosis might be made even without further examination, he is asked the question, "Well, have you not consulted your physician relative to this condition?"

"Oh, yes, but he said, 'Well, I think you have hyperchlorhydria,' and has given me some powder," probably an alkaline mixture, and that is the extent of the diagnosis and the extent of the treatment.

This is not entirely the physician's fault, since the disease not being of a disabling character, in many cases the patient fails to consult a physician until he has suffered from several attacks of the typical period distress.

In determining just what type of cases should be treated medically and what conditions demand surgery there is still a very decided lack of uniformity of opinion between opinions expressed by both. To insist that surgery is ever indicated in peptic ulcer is just as extreme as that surgery is indicated in all cases. That surgery is necessary in some cases is beyond question. That it is so frequently necessary is a reflection on the previous management of the case.

While it is generally recognized that the acute ulcer should be treated medically most surgeons insist that the chronic ulcer, if cured, this must be through surgical means. Our results with a rather large series of cases would hardly warrant this conclusion. With a very careful follow-up extending over a period of more than 10 years, of the cases we are able to trace, more than 60 per cent report complete relief of symptoms from two to ten years after treatment. In 156 cases treated medically and in which a period of at least three years had elapsed since the disappearance of their symptoms, 113, or 72 per cent reported no return of symptoms and 43, or 28 per cent reported recurrences. Of a recent series of 98 patients all suffering from chronic ulcer which we have been very carefully following because of the type of medical treatment used, 77, or 79 per cent have reported no return of their symptoms over a period of from two to eight years. While I appreciate that a

period of two years is not sufficient time to allow that there may not be recurrences, never-the-less, the results so far have been very gratifying.

Balfour reports in cases of chronic ulcer, objections to medical treatment do not exist since the symptoms are not usually so severe, the disability not so great, and the danger of fatal complications not so marked. Medical treatment of chronic duodenal ulcer is therefore not uncommon, but the data concerning late results is not so satisfactory as might be wished. Undoubtedly certain patients are relieved by medical treatment of uncomplicated chronic duodenal ulcer is justifiable before surgical interference is advised. The length of time the medical treatment of duodenal ulcer should be persisted in depends on the patient's symptomatic response, his economic status, general health, and his willingness to follow treatment. In most cases of chronic duodenal ulcer, however, surgical treatment is sooner or later indicated. (*Can. Med. Journal*, May 26.)

The surgeon is apt to be very skeptical of medical cures, but in all fairness it would seem that the same skepticism might also be applicable to surgical cures, especially when gastro-enterostomy has been the operation of choice.

Interpolation No. 4: I am very glad indeed that Dr. Judd has outlined a form of treatment for these duodenal ulcers which is more extensive than a simple gastro-enterostomy. I think one of the great objections on the part of the internist or the physician to surgical treatment has been simple gastro-enterostomy for unstenosed duodenal ulcer. In my opinion, a simple gastro-enterostomy for this type of case is worth but very little more than a thorough medical treatment.

In the light of the Mt. Siani statistics as reported by Lewisohn, this would seem reasonable. He reports that as a result of careful observation of surgically treated cases over a period of from four to nine years, that only 47 per cent of these surgically treated cases were reported as completely cured, 19 per cent had fair results, possibly meaning a slight persistence of ulcer symptoms, while 34 per cent suffered from marginal or gastro-jejunal ulcer. He further reports that a simple gastro-enterostomy, according to their findings, did not reduce the gastric acidity even after many years and their opinion is that for duodenal or gastric ulcer, the operation of choice should be a partial or sub-total gastrectomy as the application of more conservative methods is followed by too many recurrences.

In cases of chronic ulcer, the presence of pyloric stenosis, hour glass stomach, or indications of impending perforation are generally, and without doubt, considered surgical cases. It is further urged by the surgeon that in cases reporting previous hemorrhage the danger of a recurrence would warrant surgical interference. Probably the most careful review of this phase of the problem has been by Hurst who reports the results of a study of such cases as occurred in Guy's Hospital between 1911 and 1920. (*The Lancet*, March 31, 1923).

Interpolation No. 5: I appreciate that these statistics have been very severely criticized and there is no question but that the statistics from different clinics will vary. Nevertheless, I am very sure that the statistics of the Mt. Sinai Hospital have been very carefully collected. It simply goes to show that so far neither medically treated cases nor surgically treated cases respond as satisfactorily as might be desired.

In conjunction with Dr. J. J. Conybeare, a series of 600 cases admitted to Guy's Hospital on account of hemorrhage from an acute or chronic ulcer were critically studied. During this period 23 cases succumbed to hemorrhage. The deaths from this cause

amounted to no more than 0.37 per cent of 6,302 autopsies. Only 13 out of the 23 died without having undergone some previous operation for the relief of the trouble.

Interpolation No. 6: Remember that an acute ulcer is very much more likely to bleed than a chronic ulcer and the hemorrhage is likely to be more severe and more difficult to correct. I agree heartily with Dr. Judd in the idea that immediate operation for the relief of hemorrhage is a very dangerous procedure. The mortality from hemorrhage is very low.

In 7 of the 13 cases of death without previous operation, the ulcer was of the acute type—five times in the stomach, once in the duodenum and once in both duodenum and stomach. In none of these was there symptoms that would have justified surgical intervention at an earlier date. In none would surgery have prevented death. In only three of the six cases of chronic ulcer dying from hemorrhage apart from operation, 0.5 per cent of admissions from haematemesis and malaena was there a history that could have distinguished them from the acute cases. In none but these could operation have been undertaken with some hope of securing life. The immediate results of operation performed for the direct treatment of hemorrhage are so unfortunate that the danger of succumbing to hemorrhage is less than the danger of operation during hemorrhage.

He feels that the only exception to this is the occurrence of severe and persistent hemorrhage in an elderly individual with a long history pointing to the presence of a chronic ulcer whose arteries are so sclerosed that they are unlikely to contract sufficiently for satisfactory plugging by thrombosis.

"Twelve per cent of duodenal and eight per cent of gastric ulcers which had been the source of bleeding before operation, bled after operation." (D. C. Balfour, Mayo Collected papers on the clinic, 1919. Page 87).

Hahlbaum's statistics from Payr's University Clinic in Leipzig report that no less than 20 per cent of cases in which gastro-enterostomy had been performed, hemorrhage of a severe and occasionally fatal character occurred immediately, or months or even years later. As most of the cases in which hemorrhage occurred were in patients who had previously bled, the operation is now no longer performed for the purpose of preventing a recurrence of hemorrhage.

A report from Faber's Clinic in Copenhagen shows that fatal hemorrhage is not only comparatively rare, but it also shows a remarkable tendency to attack persons who have previously shown slight or no symptoms beforehand. If there had been slight symptoms beforehand, they had lasted only a short period. He has collected 55 cases of fatal hemorrhage, observed between 1907 and 1917, and the post-mortem records showed that in 16 cases the fatal hemorrhage came from a recent ulcer or erosion and in 11 other cases the source of the hemorrhage was also a recent ulcer, although other, old ulcers, were also found. In seven cases the post mortem records were incomplete, and only in 21 cases did the fatal hemorrhage come from a chronic ulcer. Most of the 27 patients who died of hemorrhage from a recent ulcer were elderly; the age of 20 of the patients was between 40 and 76.

"In view of the above statistics relative to the very low mortality in ulcer cases from hemorrhage and much less from perforation, scarcely greater than the surgical mortality in ulcer, it would hardly seem that in the absence of pyloric stenosis and hour glass stomach, that we must consider ulcer cases even where hemorrhage has occurred as to be in imperative need of surgery. It would seem that the best interests of the ulcer patient would be served by a much earlier diagnosis, by a thorough and persistent course of med-

ical treatment in which the patient must co-operate sincerely and for a period of four months rather than days, and finally if his stomach is of a chronic nature the physician and surgeon should, without prejudice, together decide as to whether the best interests of the patient would be furthered by surgery and if surgery be the choice, the type of operation be suited to the peculiar needs of the patient in order that the possibility of a return of the trouble after operation be reduced to a minimum."

In the future, for the best interest of the ulcer patient, it is to be hoped that the physician and surgeon may be able to collaborate without prejudice or undue criticism, each recognizing that there is still unsolved problems in both the etiology and treatment which demand their best united efforts.

Interpolation No. 7: I am very well satisfied that the internist or the physician who attempts to treat these cases without the assistance of the surgeon, without the consultation of the surgeon is making a mistake; but to turn every ulcer patient over to the surgeon is, in my opinion, unnecessary. It is very true that there are certain cases who will not co-operate and who should be treated surgically. But in the event that the case is sent to the surgeon, it would seem to me that there should be a very careful study to determine the particular type of operation, as is mentioned by Hurst, that would be applicable to that particular type of case. It is to be hoped that in the very near future the etiology of this trouble which seems to be increasing in frequency will be better understood, for until this is understood, I question whether the treatment, either medically or surgically, is going to be entirely satisfactory.

Thank you very much. (Applause).

Secretary Warnshuis: Now we will have Dr. Angus McLean's discussion. (Applause).

Dr. Angus McLean: My part is on the surgical treatment of ulcer. First we will divide this into the gastric ulcers and into duodenal ulcers. The gastric ulcer, of course, is that which takes place within the stomach itself. Roughly, I think the surgical treatment has been divided into four different methods: First, gastro-enterostomy as a simple drainage, and in some cases it acts well; second, excision of the ulcer by either the knife or cautery, or both; third, excision of the ulcer and if there is a great amount removed so as to cause puckering, pylorostenosis, a gastro-enterostomy; fourth, a gastrectomy or a partial gastrectomy, removing the pyloric portion and the lesser curvature, or, in other words that portion in which the ulcers are more apt to appear.

We started with the gastro-enterostomy. We have the excision and enterostomy. The later and more radical people recommend gastrectomy. Why? Because not one of them so far is perfectly satisfied. Why? Because in some cases there reappears an ulcer of the stomach. In a number of cases you have the so-called peptic or jejunal ulcer. That appears around the anastomosis or it may appear in the jejunum or in the distal portion or pyloric portion. Why? Because as was said today, you can produce an ulcer of the duodenum by distributing its function. So that isn't satisfactory. Now they have gone to the gastrectomy. In your gastrectomy you also have an enterostomy; that is subject to the same difficulties as the other.

As to the cause of ulcers, I think that almost all agree it is some type of infection, probably first in the abdomen, in the appendix, a diseased tube, ovaries or something of the like. They don't all come from that; they may come from other causes. They may come from infected teeth; they may come from tonsils. The last case I had of a severe hemorrhage with

a duodenal ulcer was a man who had the symptom, and he had almost all of his teeth pulled. I think three weeks after he had his teeth pulled he had a severe hemorrhage. That was followed a month later by another very severe hemorrhage. So pulling the teeth doesn't stop the hemorrhage. He had an active ulcer. Once you have an active ulcer, removing the cause doesn't stop it, it goes on. You have your infection there and you have your activity and you have the ulceration of that. So much for the treatment of ulcers of the stomach.

Now we come to almost the same thing in the treatment of ulcers of the duodenum. As it has been said, almost all ulcers are in the first portion; the great majority are on the anterior wall. Up until today what has been the treatment? It has been a long medical treatment, but there is no medical treatment that is satisfactory. It cures a percentage, but they have their symptoms and then they have recommended to them or they seek surgical treatment.

The treatment surgically today for a duodenal ulcer is a gastro-enterostomy, a posterior gastro-enterostomy. Here you have your enterostomy again, here you are subject to the peptic ulcer again and you sometimes have then anterior and posterior. I think the jejunal ulcer or peptic ulcer comes about twice or three times more often in the anterior gastro-enterostomy than in the posterior. So the posterior is the one to recommend.

Now, what are you going to do with the ulcer? The ulcer is there. If you can, the thing to do is excise it and close it up. Simply excising an ulcer and closing it up doesn't guarantee results. You had better do a gastro-enterostomy. In case of hemorrhage they will say, "Go in and tie off the blood vessels." That isn't so easy to do. We don't all find them so easily. It is a good thing to do.

Then there comes the case of the severe hemorrhage, what should you do? Go in and remove it or tie it off or tie off a lot and remove the area. It is a very serious matter because the patient is in a very serious condition. I would rather take my chances in building it up and waiting, because few of these cases bleed to death. They will bleed down and after a while they will recover. Don't give them transfusion and those things too soon, wait for 24 hours and then you can give them that and bring them back and wait a time and bring them up.

Now, they recommend the removal of a portion of the duodenum. It is same thing as removing a portion in gastrectomy. In other words, what has brought gastro-enterostomy rather into question and disrepute in some cases is because it has been done where there has been no ulcer, just as was said today. Where you have the duodenitis, gastro-enterostomy isn't going to do any good. It leaves you just where you were. You haven't any spasm of that pylorus and it won't do any good, and that is still a medical case. To remove that portion of the duodenum that has the duodenitis, I am afraid will get you into severe trouble, because once you cut off the duodenum and tie any portion you will have trouble, you will have ulcers, something will happen in digestion, and that is a serious matter.

So far the treatment of duodenal ulcer is gastro-enterostomy. Remove the ulcer if you can, pick it up where you think it is, tie off the blood vessels and leave that where it is.

Now, as I have said, there is no standard positive surgical treatment that is satisfactory to everybody for ulcer of the stomach. Up-to-date there is no standard, perfectly satisfactory surgical treatment for duodenal ulcer. You do get beautiful results in a great many cases, but in summing it up it isn't a standardized treatment. Today there was one thing

here that everybody agreed upon, that was that a perforated duodenal ulcer was positively surgical. There wasn't a doubt about it. Now comes the great trouble of waiting for that ulcer to perforate. It is a serious matter. (Laughter). You hadn't better wait.

When you have a perforation of the duodenum and a perforation of a gastric ulcer, you have different symptoms afterwards. In perforation of duodenal ulcer, of course, you have the pain. That pain will pass down and in two or three hours you have the pain right over the appendix.

I have in mind now a picture of where this happened in that fellow, Valentino. Valentino was operated on for appendicitis because his pain and tenderness was right over the appendix. Then they discovered there was something there and looked up and found he had a perforation of the duodenum. So that is something to remember.

One more point on perforation. If you get the perforations of the duodenum in three or four or five or six hours, they should get well if you don't lose too much time fixing up the appendix.

Where one is perforated for 15 or 20 hours, the chances are very doubtful, you have an irritative peritonitis that is serious. If you operate after that time and get the ulcer and close it, be sure to put a drainage in the flank or better in the pelvis. There are contents you had better drain. There are those surgeons who believe that nothing should be drained, that the omentum and peritoneum will take care of everything, but I rather believe that they had better help nature a little or go hand in hand with God and let out those contents through a tube. The patient will be better off.

As I say, from what I see in the medical treatment of gastric or duodenal ulcer, it is not satisfactory. There is plenty of room for the medical man to advance. I can say that also for the surgeon, there is room for the surgeon to advance. (Applause).

THE PHYSICIAN AND THE DEAFENED PATIENT*

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NEW YORK CITY

The glamor of surgery and the satisfaction in caring for acute diseases which result either in death or cure within a short time, naturally makes the care of patients suffering from a surgical condition or an acute disease far more fascinating than attempting to relieve a condition which is baffling and which shows a tendency toward chronicity. Yet acute sufferers do not deserve our sympathy half as much. They either get well within a short time and then can lead a normal existence or else they pass into the great beyond. The chronic sufferer has a general physical and mental reaction toward his infirmity as long as he lives and this condition is particularly so in deafened individuals who have so little to look forward to. In spite of the best that we can do for them with our present day knowledge, we can prom-

ise them but a slight amount of relief, seldom a cure and most often must tell them that we can but arrest the condition.

Under these circumstances, is it fair for the average medical man and particularly the otologist to assume the attitude that he does? He is not only dealing with a physical make-up which will respond to physical treatment; he is also dealing with a complex mental mechanism which needs adjustment if the patient is to be of any worth to himself and to the society in which he moves. The result of our negligence has been that most of these patients have turned to the fakers within and without the medical ranks and have spent thousands of dollars uselessly. I can stress this point no better than to refer you to the files of the American Medical Association (articles by Dr. Cramp), in which you will find detailed the number of quacks who have mulcted the deafened public and a description of their nefarious schemes. The ultimate result is evident to everyone but the patient—no relief, a hopeless despondency, a condition getting worse and sometimes irreparable harm done as will be evidenced by the following example:

A young school teacher came to our offices from a small town in Maine. Her hearing had been defective for a number of years. She obtained a position in one of our New York schools and came to us regularly for treatment. We were able to keep her hearing defect at a stand still and her hearing was good enough for her to keep to her work. A few summers ago, having saved up a few hundred dollars, she decided to go abroad. Then one of her intimate friends told her of a marvelous doctor nearby who had cured thousands of their hearing defects. So instead of going abroad, she traveled a few miles to this miracle worker who stuck his fingers into her throat, manipulated her middle ears, made a few mystic passes, took all of her money and assured her that she was much improved. Her condition was so bad that she shamefacedly came to our offices and told us the story. A hearing test showed us that her hearing defect was far worse, that there was an intense inflammation of both Eustachian tubes and that it was almost impossible for us to do anything to make the condition better. In the past year she has dropped out of sight. Whether she is alive or dead today, we do not know. This is one of but many cases which anyone who has come in intimate contact with patients of this kind, could cite.

In a survey of the Hard of Hearing made by a special Committee of the American Federation of Organizations for the Hard of Hearing, headed by Mrs. James F. Morris of Boston, proof was given of the need of proper care of

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the more than three million partially deaf children of the country. Three million or more partially deaf children! Eighty percent of these children can have their hearing defect cured at this time. One hundred per cent of them will be deafened adults if nothing is done to remedy the condition in early life! I wish to bring these facts before you at this time to impress upon you the duty you have to perform—to properly weed out the deafened children in your community and see that they are properly treated and to see that these children be given a fair deal in school and not be permanently retarded in their studies.

The physician is called upon to see three classes of deafened patients. I am eliminating the so-called deaf mute child, who is more or less an educational and state problem. He is called upon to advise on the condition of deafened children; he is called upon to treat and to advise adult patients, a part of whom fall into the class who can be improved medically and a part of whom will have to be treated along psychological lines. I know it is far easier to state that little or nothing can be done; but not only is this false and a lazy way of getting out of a difficult situation, but it is criminal to merely remark, "It is foolish to waste your time trying to do anything; you are going to get worse no matter what you do." Such advice has led to a watery grave in the river in more than one case. One can at least examine the ears to see if any cerumen or discharge is present or not or he may note some abnormality in the nose and throat which is aggravating a catarrhal condition. To prove the criminality of neglect in such cases, let me cite the case which came to the attention of one of our confreres, Dr. Wendell C. Phillips, now President of the American Medical Association. A child was brought into his office who had been suffering from a severe degree of deafness for over two years. Her tonsils and adenoids had been operated upon on two occasions but the deafness still persisted. Examination showed both ear canals filled with cerumen. When this was removed, the hearing was greatly improved and eventually returned to almost normal. Neither of the two medical men who had operated upon her throat took the trouble to look into her ears although her deafness was her chief complaint.

The children which one encounters belong in two classes—those who are suffering from a suppurative condition of the ears and those who are deafened as the result of a so-called catarrhal process. Neither one of these conditions will improve if nothing is done and neither will improve very much if the little patient is treated in the ordinary ear clinic. I do not wish to give my reasons here except to

say that results can only be obtained when one uses the utmost patience to obtain the confidence of the child and when he is willing to use every necessary care. I have come to the conclusion that each case has to be individualized. The best evidence that a great deal can be done will be found in the following facts gleaned from our personal experience in running a Clinic for the Prevention of Deafness in our own offices for over three years. Remember that almost all of these children had received clinic treatment and the results had been practically nil. In this period, we treated over four hundred individual children who were sent to us with complete personal and family histories by the social service workers of the New York league for the Hard of Hearing. Almost half were so-called catarrhal cases and the other half were suppurative conditions of the ears. In every case a hearing test was made with the 2-A audiometer. In some cases it was necessary to have the child come three or four times and watch other children have their hearing tested before we could find out how much hearing they had. Trying to test the hearing of a nervous or unruly child is utterly impossible and without the test one cannot tell whether there is any improvement or not. The ears were then carefully examined. Attendant physical conditions, both local and general were noted and, when necessary these were attended to. The kind of treatment which was given, depended upon the individual. A general outline of these treatments will be given here.

First of all let me say that it is absolutely impossible to obtain any result unless the physical resistance of the patient is brought up to the normal. This fact has often been stressed by Dr. Franklin W. Bock of Rochester, who has been one of the pioneers in this work on children. He states, "Where parents are wealthy and every medical attention is given to the child, the percentage having defective hearing is extremely low. Where little or no medical attention is given and no follow-up work done, the percentage is high." We agree with this statement. Cod liver oil or one of the other fat vitamins with plenty of fresh air, the early removal of infected tonsils and adenoids will do far more than ignorant or careless meddling with the ears.

The remarks of Miss Caroline E. Vose, in the Survey will fit in well here. She states: "There is much general ignorance on the insidiousness of deafness which often makes it possible for it to become fairly advanced before it is detected. The most important first step in the program against deafness is to secure recognition for the fact that repeated colds, running ears, a high arched palate, any

nasal obstruction, infected tonsils, adenoids, measles, influenza, scarlet fever and so on, may all cause deafness and, therefore, the ears should be frequently and regularly examined and should be treated immediately if even the most minor trouble is discovered."

I shall briefly outline the method of treatment employed in our children's clinic.

CATARRHAL CASES—

In the majority of these patients there was some pathology of the nose and throat which needed attention. It was surprising to find out how many of them had tonsils or adenoids. In cases where these had been removed there was often some infection in the nose, particularly a sinus condition. There is no use whatever to attempt to give permanent relief while such pathology is present. Of course one comes up against the inane prejudice of the parent who is only too willing to let well enough alone and, often will not have the underlying trouble attended to. One realizes that the Eustachian tubes of children are short and often well open so that the condition in the ear will respond to politzerization. In fact we found that the majority of these cases could be cured in this way. But under no circumstances should these children be taught to inflate their own ears (the old Valsalva method) because this will surely, in time, create a relaxation of the drum.

If the ear does not respond to politzerization one must have recourse to the use of various sounds and applicators which will medicate the Eustachian tube and the middle ear. It is always difficult to employ this method of treatment in children until one gains their confidence, but it is surprising to see what one can accomplish after that. Results always speak for themselves and we were happy to note an improvement or a cure in the majority of our cases.

Suppurative cases. The types of cases thus treated ran from the simple, non-odorous, serious discharge to the profuse, thick, odorous suppuration which indicated diseased bone. Each case had to be treated individually. The majority of them responded to thorough cleansing, to the application of drops of mercurochrome or acri-violet, to zinc ionization and autogenous vaccines locally applied. In a few instances it was necessary to eliminate the underlying factor or to perform a radical, mastoid operation. Here, again, our interest was mainly in the proper handling of the child from the physical and mental point of view. This resulted in our obtaining satisfactory results in the majority of cases. Unfortunately we reckoned that the number of cases which we treated was but a drop in the bucket. Our investigation showed that there were at least

fifty thousand children of school age suffering from defects of hearing. What could be done to reach them all? Surely our clinic wasn't doing it. So we have presented the matter to the health authorities and to the board of education and we are hoping for concerted action within the near future. From the view-point of economics, let me give you the following figures from Dr. Bock of Rochester, N. Y. He had checked up the grade standing of 349 children in or near the danger zone and found that 128 had met their promotional standings each year; 83 had repeated once; 60 had repeated twice; 45 had repeated three times; 13 had repeated four times; 9 had repeated five times; 1 had repeated six times.

Considering that a "repeat" in Rochester costs \$60.00 the cost to the city was \$26,460.00 and wasted many years in education. Such significant facts should make one realize how important this subject is.

The problem of the adult hard of hearing must be dealt with in a different way. In the first place, one must realize that almost all of these patients have been suffering from an insidious process since childhood and that in the majority of instances, it is absolutely impossible to cure the condition although it may be considerably improved. Adhesive processes have taken place, definite connective tissues changes beyond repair. The problem is not to bring the diseased parts back to the normal but to readjust the parts so as to obtain hearing. One cannot make a short leg longer but he can get the spine to accommodate so that the patient is able to walk with little difficulty. Once one gets the patient to look at his infirmity from this point of view, he will be able to do a great deal toward bringing the hearing up to the maximum and keeping it there.

Following routine procedures such as Politzerization and catheterization will not give the desired result. One must analyze the patient's history and determine what etiological factor is keeping up the trouble and moreover, he must get the patient into a more optimistic frame of mind. I have seen patients improve after an irritating gall-bladder had been removed; I have seen other patients improve when nothing was done for them by the physician but where they had altered their lives so that they were in a better mental and physical state. One of my patients, a school teacher, had a hearing defect of 40 per cent. She went to Yellowstone Park one summer and came back with an improvement of 10 per cent. This improvement has been maintained over a number of years.

Of prime importance, after a thorough examination of the nose, throat and ears, is the testing of the hearing with the audiometer.

This may indicate a defect in the lower tonal range only or in the higher range or there may be a defect in the entire musical scale. The chart is easily read and an interpretation can often be made from it. If the first state is present, local attention may be all that is necessary. If either of the other two states exist, one must seek for some factor in the system which is acting as a irritant to the internal ear mechanism and to the middle ear. A focus of infection may be found in the teeth, in the tonsils or sinuses of the nose, in the gastro-intestinal canal or in the urinary tract. All the local meddling in the world will not help unless the source of irritation elsewhere is removed. I believe that tonsils, whether they appear to be infected or not, should always be removed; for it has been my experience that it is impossible to improve a chronic ear condition as long as they remain in the throat. I recall one patient who had undergone strenuous ear treatments in another city for over two years with no improvement. She developed an acute tonsillitis and I told her her tonsils would have to be removed. Almost at once there was an improvement in her hearing which has continued.

Here again, the local treatment will vary with the individual. In almost all instances there is some pathology in the Eustachian tubes which will respond best to medication on an applicator and a bougie. Adjuvants to treatment are diathermia, violet ray direct to the Eustachian tube, ultraviolet ray and vibratory massage. I have not the time to go into details of treatment here. In many cases where we are unable to pass an applicator or bougie, we are able to open up the tube by making a direct application to the tube of the high-frequency current passed through an especially made vacuum electrode.

We are beyond the time where it is necessary to fool either the patient or ourselves. If proper intelligence is used in getting at the etiological factors and in making proper hearing tests; if one gives his treatment according to the findings in the individual case, it will not be long before he discovers that he is making progress. It is our custom to treat one ear at a time and to allow an interval of three days between treatments. Four treatments are given to either ear and the hearing then again tested on the audiometer. If the hearing is the same or if it has improved, we are more than satisfied. If the deafness has increased, we feel that it is necessary either to try some other procedure or to advise the patient that medical treatment is of no use and that we must find some method of mental reconstruction which will make life more than worth while living. If the patient has improved, he is given a rest for a few months, the hearing is again tested

and, if we feel that we can make further improvement, he undergoes another series of treatments.

I have spoken of mental rehabilitation or reconstruction of the deafened. It is an absorbing subject and has been well dealt with in a recent book called "Ears and the Man," written by three of the social workers of the New York League for the Hard of Hearing. The physician's duty does not end with the medical treatment of his patient. Few of us would meet with success if we depended upon this alone. The confidence our patients have in us, their willingness to follow our orders, regardless of their own judgment, demonstrates the time worn adage that confidence is half the treatment in getting the patient well. No class of patients with whom we come in contact needs the personal element injected into his treatments more than the deafened patient. He is looking for comfort; he is looking for someone to say that he is a fit individual for society; he is looking for someone who will tell him the proper lines of conduct to pursue both in his social and industrial life. And none is better fitted for this task than the physician or otologist who knows so intimately what his trouble is.

EDUCATION

You will ask what the physician can do under these circumstances. I shall answer this first by telling you that the deafened themselves have opened the way by establishing Leagues for the Hard of Hearing throughout the country who have consolidated themselves into a national organization called the American Federation of Organizations for the Hard of Hearing. Such leagues should be in every city in the United States and in the course of time, they will be. They were primarily formed for mental rehabilitation of the adult hard of hearing but their principle task at present is to teach the profession and the laity that deafness can be prevented.

The work of these organizations falls into four classes—education, social service, employment and recreation. First such deafened persons are told that medical treatment is useless. They are then taught lip-reading (the greatest boon to the deafened) or else they are helped to select the proper hearing device. They are urged to use the radio, with high amplification, as much as possible. It is surprising how many of these people have had their lives made liveable by proper education along these lines. Social service consists in helping these people with their intimate home and social problems. It may happen that they are in the wrong employment; it may happen that they are associating with the wrong people. The employment department means a great deal to these

people. It is unfortunate enough to be deafened if you belong to a class where making your own living is not of particular moment; but it is disastrous if you have to make a living wage for yourself and your dependents. Many a deafened person is in the wrong employment and stays in it until he is discharged. When that time comes he is a hopeless despondent because he has seen what was coming for some time. No deafened person should try to be a salesman or a trained nurse but that does not mean that there are not many other kinds of work which he can perform efficiently. I have seen a trained nurse transformed into a laboratory technician in a short time; I have seen a salesman made into a first class jewelry worker overnight. In our employment bureau at the New York League for the Hard of Hearing, we are able to place over 90 per cent of our applicants in satisfactory positions and many of these people were misfits before. The recreation department of these leagues is most worthy of comment. Most deafened people feel that they are excluded from the joyous society of hearing people. At first such a person attempts to "listen in" but, after a while, he gives it up as a bad job. The result is that he slinks off into a corner if not actually, he does so figuratively. When he first enters into the social activities of the League, he is likely to take the same attitude. But when he sees other deafened people around him, some of them so badly off that a hearing device is of no use and resort is made to lip-reading alone, he begins to feel that he is not the only one afflicted and that there are others worse off than he is. As time goes on, he attends the men's or women's clubs, plays the games and makes new friends until he finds that he is far happier than he had been for many years. When one has seen a young girl who was about to commit suicide because of her infirmity, turned into a happy human being; when one sees a man of 50 who has lead a secluded life for a number of years dancing happily; when one sees an economic misfit put into a proper working position; in fact when one sees a group of deafened people transformed from a grumpy lot of down-in-the-mouth individuals into smiling and joyous deafened people, he is satisfied that this new work for this class of unfortunates is more than worth while.

RELATION OF PULSE RATE AND PULSE PRESSURE TO BASAL METABOLISM*

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The relation of pulse rate and pulse pres-

sure to basal metabolic rate has been commented on by many observers. A survey of the literature published on this subject during the last five or six years reveals a considerable degree of unanimity among those who have written on this subject. It is not my intention to review this literature. I wish to present the result of my own observations on a series of cases and to call attention to the fact that these observations agree for the most part with what has already been published on this subject. My reason for this presentation is to call the attention of the men in general practice to a method of diagnosis which may be a help in cases which offer difficulty.

In a general way we may state that increased metabolism is attended by an increase of the pulse rate and the pulse pressure. We are familiar with the fact that increased exercise, intake of food or nervous excitement is associated with an increase in pulse rate. We also know that the blood pressure readings under conditions of rest and relaxation are lower than when for any reason metabolism is increased. The explanation of this is quite evident. Increased metabolism means increased oxydization. The oxygen is carried to the tissues by the blood. The increased demand for oxygen is satisfied by the greater volume supplied to the tissues. Now the blood supplied to the tissues depends under normal conditions mainly on two factors—the rate of the heart beat and the force of the heart beat. The rate of the heart beat is easily counted. The force of the heart beat is best determined by the difference between systolic and diastolic pressures.

There are certain pathological conditions to be borne in mind which may modify this general statement. In conditions of anemia where the oxygen transfer is interfered with by a lack of oxygen carrying hemoglobin we have an increased pulse rate due to a failure of internal respiration. In essential hypertension arterial and capillary resistance brings in an added factor which must modify the general statement. In organic heart disease—especially in auricular fibrillation and in aortic valve disease pulse pressure readings are not of great value in indicating metabolism. Except for some such abnormal conditions we may state that the pulse pressure and the pulse rate indicate the basal metabolic rate.

That an increase in the pulse rate is a fairly constant symptom in hyperthyroidism is generally accepted. This is probably the most important single symptom of the disease. In fact, with our present knowledge of thyroid function it may be stated that, in every case of rapid pulse in which other cause for the tachycardia is not apparent, we should consider hyperthyroidism as a possible cause. On the other hand,

* Read before Section on Medicine, M. S. M. S., Lansing, September 1926.

in cases in which hyperthyroidism seems to be present, a slow pulse under conditions of rest should make us suspicious of the possibility that the symptoms are due to something other than thyroid disfunction. Sturgis and Tompkins state that in their work at Peter Bent Brigham Hospital an increased basal metabolism is seldom found with a pulse rate, at complete rest, below 90 per minute and rarely found with a rate below 80.

The consideration of the added factor of pulse pressure gives us a still better basis on which to estimate metabolism. In exophthalmic goitre the diastolic pressure is likely to be low while the systolic pressure shows varying degrees of elevation depending upon the degree of over function and the length of time the symptoms have been present. In toxic adenomatosis there is likely to be an elevation of both the diastolic and systolic pressure with a high pulse pressure. Read of the Stanford University School of Medicine states that by a consideration of the two factors—pulse rate and pulse pressure—he can predict the basal metabolic rate within 20 per cent in 91 per cent of cases and within 10 per cent in 60 per cent of cases.

We should like to present a series of 217 metabolic readings. These cases were all sent for basal metabolism estimation because of suspected hyperthyroidism. In preparing the figures which we are presenting we have eliminated all cases of auricular fibrillation and of definite aortic disease. All other cases have been included. Basal metabolic rates were estimated by the Roth-Benedict metabolimeter. Pulse rate was determined preceding and following the metabolism estimation. Where there was a variation in the pulse rate in the two readings the lower of the two readings was taken. The blood pressure readings were taken immediately following the metabolism estimation while the patient was still reclining. In this connection one should call attention to the fact that under these basal conditions not only is the pulse rate lower than under ordinary conditions, but that both the diastolic and systolic blood pressure readings are lower.

We have tabulated these cases according to the metabolism rate and have then taken the average of the product of the pulse rate and the pulse pressure for each of the metabolic rates. For example, we may say that the normal pulse rate is 80 and the normal pulse pressure somewhere about 50. The product of these two factors is 4,000. Our figures for the series of 217 cases is as follows:

PULSE RATE TIMES PULSE PRESSURE

14 Cases below minus 10.....	3470
68 Cases between minus 10 and plus 10.....	3673
33 Cases plus 11 to plus 20	4662

35 Cases plus 21 to plus 30	5202
18 Cases plus 31 to plus 40	5952
10 Cases plus 41 to plus 50	6590
39 Cases over plus 50	8716

217 Cases

It will be seen from this that averaging all the cases in the series there is a fairly consistent rise in the product with the increase in metabolic rate.

A consideration of the average rate alone in these cases is also of interest. The table is as follows:

14 Cases below minus 10—average pulse rate....	80.7
68 Cases from minus 10 to plus 10—average pulse rate	82.
33 Cases plus 11 to plus 20—average pulse rate	90.
35 Cases plus 21 to plus 30—average pulse rate	92.9
18 Cases plus 31 to plus 40—average pulse rate	93.6
10 Cases plus 41 to plus 50—average pulse rate	107.
39 Cases over plus 50—average pulse rate.....	113.5

217 Cases

It will be seen from this that the rate increases fairly consistently with an increase in metabolic rate.

A consideration of the average pulse pressure alone is seen in the following table:

14 Cases below minus 10—average pulse pressure	43.
68 Cases from minus 10 to plus 10—average pulse pressure	44.8
33 Cases from plus 11 to plus 20—average pulse pressure	51.8
35 Cases plus 21 to plus 30—average pulse pressure	56.
18 Cases plus 31 to plus 40—average pulse pressure	63.6
10 Cases plus 41 to plus 50—average pulse pressure	65.9
39 Cases over plus 50—average pulse pressure	76.8

From this it is seen that the pulse pressure increases as the metabolic rate increases.

While the law of averages is not convincing, it is only by observing such averages that we may reach conclusions. Of course the larger number of cases reported, the more certain may one be of his conclusions.

While I should not wish to advocate the method of estimating basal metabolism from an observation of pulse rate and pulse pressure, I do believe that this method offers a way of selecting cases for metabolic rate tests. If one will visit his patient at the house in the morning, having him remain in bed without eating until the readings are taken, one can get much valuable information which cannot be secured when the patient in the course of his daily activities, visits the office. Pulse rate and pulse pressure under basal conditions are much different than when made during routine office examination. In case the readings cannot be

made under basal conditions, allowing the patient to lie quietly for thirty minutes or more will be of value in such estimations.

In conclusion I wish to say that, as a result of these studies, I am of the opinion that by considering the two factors, pulse rate and pulse pressure taken under basal conditions, we can with a considerable degree of accuracy estimate the basal metabolic rate. At least we may judge what cases will be normal or below and what cases will be markedly elevated in the majority of cases. Of course it is the border line cases and the exceptional cases that make necessary the estimation of metabolic rates by more exact methods.

DISCUSSION

Dr. William Vis (Grand Rapids): I think this is a valuable contribution. It isn't every one of us who can have metabolic determinations made as often as we wish and when we wish, and here is a method which certainly is open to us in a much wider range than the metabolic determinations are for most of us.

I am particularly interested in these studies of Dr. Jackson because in a sense he has been thinking of the same line of studies that I had in mind in the paper which I presented this morning. I am also interested to note that where he had his pulse pressure approximately 70 points, his metabolic rate was about 50 or better. Roughly speaking, I think that confirms the idea I had in mind this morning when I called attention to some of our slides where there was an approximation of femoral and brachial pressures and the diastolic was just half of what the systolic was in those in which we noticed it.

I think Dr. Jackson is entirely right in stating that the pulse rate is our most dependable sign in hyperthyroidism. Although this pulse rate is a very variable factor, that in itself is an evidence of hyperthyroidism and nervous instability.

Chairman Sladen: May I add a word of congratulation to Dr. Jackson? It seems to me a man who has carried on the work of the Council for four years and has had time to do such careful clinical observation as this should be congratulated. He has emphasized a real vital point, it seems to me, that should be emphasized in every paper which deals with blood pressure readings, with pulse readings, pulse pressure, respiration rate or basal metabolism, and that is there is a difference between basal conditions and ordinary conditions. I think it is just as important if one is studying blood pressure that they make observations, take care, give consideration as to the conditions under which these readings are taken that they be just as basal as possible. The very best basal condition for a patient at the best is very poor. One can't eliminate the nervous and mental factors entirely. One can control food and pain and time of day and the condition of the bowels and exercise, but one can't eliminate the nervous feature which prevents one from getting a real basal condition. That has all been emphasized so much in regard to basal metabolism determinations. One is apt to be a little loose in emphasizing it in taking blood pressure observations, pulse rates and others.

I think Dr. Jackson's observations have peculiar value in that he has emphasized that one control point that is very vital.

STUDY OF FEMORAL BLOOD PRESSURE IN 600 CASES WITH SPECIAL REFERENCE TO HYPERTHYROIDISM*

(Preliminary Report)

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INTRODUCTION

It is generally assumed that blood pressure is uniform in all the large branches of the aortic system. Physiologists have recorded only slight differences in the large arteries and textbooks state that such variations are insignificant.

Physiologically speaking, this theory may be correct, as the physiologist deals primarily with normal function. In normal patients there is only a minor difference between the pressures in the brachial and those in the femoral arteries. However, in abnormal subjects there may be a marked discrepancy between these pressures. Although the theory may hold in the field of normal physiology, in the field of pathological physiology it fails to hold.

This was pointed out some thirty years ago by Leonard Hill, who studied the pressures in cases of aortic regurgitation. He found the femoral pressures higher than the brachial and the pulse pressure also higher in the femoral artery.

The findings of Leonard Hill provided the incentive for the study reported in this paper. Hill's figures on aortic cases were confirmed as shown in Table 1. The writings of Hill and his associates emphasize the diagnostic value of the femoral pressures, assuming that the findings are pathognomonic of aortic regurgitation.

Our experience is not entirely in accord with this. Femoral blood pressure may be greatly altered in conditions other than aortic lesions. Particularly in arterio-sclerosis with hypertension has this been found to be the case. The femoral pressure may exceed the brachial by as much as 80 or 100 mg. of mercury in arterio-sclerosis. A difference of 50 mg. of mercury or more is common in hypertension. The systolic pressure shows relatively more discrepancy than the diastolic and, as a result, the pulse pressure is higher in the femoral than in the brachial artery. (See Table II.) It is an interesting speculation to inquire why the femoral pressure should be higher.

MECHANICAL CONSIDERATIONS

It has occurred to many of you, undoubtedly, that the size of the artery might effect the

* Read before Section on Medicine, M. S. M. S., Lansing, September, 1926.

blood pressure. The femoral artery is larger and has a thicker wall. The heavier wall may require a slightly greater force to compress it and, consequently, give a higher reading. The leg muscles are also larger and may interfere with compression of the femoral artery so as to give a higher reading of the sphygmomanometer. The femoral artery conveys a larger stream of blood and it is more directly in line with the current in the aorta. Both of these factors would tend to increase the momentum of flow in the femoral more than in the brachial and might increase the blood pressure.

All of these anatomical factors are essentially constant in their action. One would expect to find their influence on pressure to be the same at every reading. We cannot conceive of the arterial wall or musculature of the leg except as constant factors.

If femoral pressure were always found higher than brachial, these anatomical factors might serve as the explanation and we might easily be misled into accepting this conclusion. However, the exceptional patient, as we shall show subsequently, throws some doubt on any anatomical explanation.

Femoral pressures are not necessarily higher, not even in arterio-sclerosis or in hypertension. They may be identical with the brachial pressures or only slightly higher. Apparently this occurs in so-called "essential hypertension" as well as in arterio-sclerosis with or without hypertension.

EQUALIZATION OF PRESSURES

The phenomenon of an elevation of femoral pressures in itself is an interesting discovery. Far more interesting to me is a second discovery relating to the behavior of the brachial pressures in the presence of high femoral pressures. This may well be illustrated by an actual case history.

Mr. O. E., age 30 years; a case of hyperthyroidism; the arm pressures taken at various times were as follows: (Table V.)

146.....	80
168.....	78
144.....	78
165.....	82

These figures acquire a new significance when the simultaneous femoral pressures are appended, as follows:

Brachial		Femoral	
Systolic	Diastolic	Systolic	Diastolic
146	80.....	178	80
168	78.....	170	84
144	78.....	180	92
165	82.....	178	88

Also in the case of Mrs. E. S., age 38 years.

140	68.....	194	76
144	78.....	196	78
178	82.....	180	82

Some of these readings show the femoral higher, but in others it equals the brachial. It

is suggested by these series that at times the brachial pressures may rise until they approximate those of the femoral. Examination of a large number of patients confirms this suggestion.

The reason for this equalization of pressure is not apparent. In general, it may be stated that in normal patients at rest it does not occur, as the femoral readings are always somewhat higher. Nor does it appear as a result of arterio-sclerosis or cardio-vascular disease.

In the series here reported equalization of pressures occurred predominantly in the thyroid type of cases. Cases of toxic goiter have shown the phenomenon in its most marked form. A few cases of non-toxic goitre also show it, as well as a third group with an involvement of other endocrine glands. A comparison of hyperthyroid cases with normals will bring this out more in detail.

Table III shows some examples of brachial and femoral pressure in average cases. It will be noted that the femoral readings are higher for both systolic and diastolic pressures. The pulse pressure is higher in the femoral artery both relatively and absolutely.

If these figures are representative they would seem to indicate that brachial pressures normally are lower than femoral.

In contrast with the normal figures we have in Table IV some pressures taken on thyroid patients, most of whom show an approximation of the brachial and femoral pressures. These, however, are selected cases. If all thyroid cases are taken there will be some who do not show this equalization of pressures.

The reason for the non-conformity may be brought out by referring again to the slide shown a few minutes ago. In the case of Mr. O. E. (Table V) one of the readings shows the characteristic equalization; another shows a partial approximation; and two fail to show it at all. This indicates that the syndrome may be present only at times. In our experience most thyroid patients show this inconstancy, (Table VI), while a minority have maintained an equalization.

This inconstancy of the findings detracts from its value as a diagnostic sign, but does not entirely invalidate it. Many other diagnostic signs may be inconstant, e. g., fever. In a tuberculous patient, we may find a temperature normal in the morning but elevated in the afternoon. Similarly I believe that equalization of pressure may occur only at times of greater pathological reaction much as a febrile rise occurs at the height of the reaction in tuberculosis.

The case of Mr. O. E. illustrates this (Table V). In the first reading he was relatively calm and his pulse rate was 85 per minute. The

brachial pressures are lower at this time. At the second reading, four days later, he was very nervous and his pulse rate was 140. Here we find that the brachial pressure has gone up until it equals the femoral. The third reading was taken four hours later after the patient had quieted down and showed a normal relation except that all pressures are somewhat high. The fourth test shows a partial approximation and was taken after a very restless night.

We might be tempted to conclude that the equalization can be illicit best during the period of greatest thyroid toxicity. Although a number of patients have shown similar reactions, our series of cases does not provide sufficient data to warrant such a conclusion.

DISCUSSION

Now let us go back to the consideration of what causes a higher femoral pressure. The anatomical factors are constant and could possibly account for a constantly higher pressure, but fail to explain pressures that become equalized at times. Therefore, we must look beyond the anatomical for an explanation.

The mechanics of blood flow may have a bearing on differential blood pressure changes. Blood flow is the main factor in the rise or fall of pressure in the body as a whole, but it is difficult to understand how it could cause a discrepancy between pressures in the arm and the leg.

If we include the vasomotor system we might conceive of a mechanism producing differential changes in pressure. We know that the vasomotor system does not effect all arteries equally; in fact, it does not effect certain arteries at all directly. Strictly speaking, one should differentiate between vasomotor and vaso-reflex systems. It is probable that both are involved in the maintenance of blood pressure.

Another possible factor is a chemical or physio-chemical one, viz., adrenalin secretion. We know that adrenalin does not effect all arterioles equally and it is conceivable that it might act so as to raise femoral pressure more than brachial. I have performed some experimental work with the use of adrenalin hypodermatically. I believe adrenalin does not account for it.

TECHNIC

The technic of estimating the blood pressure in the femoral artery is similar to that of taking brachial readings. The cuff is applied just above the knee and requires only the addition of a longer wrapping to hold it in place. The Korotkoff sounds are elicited with the stethoscope placed over the popliteal artery.

The patient must be in the horizontal position and the head should probably not be much higher than the body. In our records the prone position only has been employed. The leg is slightly drawn up and abducted. To one unaccustomed to the technic, it might be easier to use the supine position. Either leg may be tested as there seems to be no variation between the two sides. The same precautions must be observed as in taking pressures in the arm, viz., avoidance of pain, cold, excitement, etc.

The type of sphygmomanometer is not of much importance, providing that the apparatus is in good order. The Tycos type is sufficiently accurate. I have experimented with original apparatus and cuffs of various widths and found the standard types as good as any.

CONCLUSION

Whereas a study of some six hundred patients with a variety of pathological findings is too limited to warrant conclusive deductions we must be satisfied to point out certain highly suggestive phenomena and leave for further research the final conclusions. With these qualifications in mind, it seems justifiable to state that:

First—Femoral blood pressure is usually higher than brachial pressure.

Second—In hypertension and in arterio-sclerosis the femoral may greatly exceed the brachial pressure, with a relatively higher pulse pressure in the femoral.

Third—In thyroid cases there may occur an equalization of pressures, the brachial apparently rising to the level of the femoral.

Fourth—Such equalization of pressures may become permanent.

Table I

AORTIC REGURGITATION

Brachial		Femoral	
Systolic	Diastolic	Systolic	Diastolic
112	55	169	62
105	72	128	86
165	42	192	42
136	38	169	48
130	80	162	88
136	38	242	68
140	32	202	38
112	28	164	44
145	20	160	42
100	38	162	62
122	58	178	64
180	50	236	72
182	76	182	76
165	20	260	28
144	48	228	52
150	88	186	105
142	40	252	44
114	60	168	72
176	88	248	88
162	98	203	112

Table II
HYPERTENSION

Brachial		Femoral	
Systolic	Diastolic	Systolic	Diastolic
162	84.....	214	98
192	108.....	274	137
234	142.....	294	158
ARTERIO-SCLEROSIS			
180	81.....	254	118
232	121.....	328	132
182	107.....	234	120

Table III
AVERAGE CASES

Brachial		Femoral	
Systolic	Diastolic	Systolic	Diastolic
72	47.....	96	53
101	67.....	124	83
108	66.....	122	73
112	76.....	144	88
124	65.....	153	82
176	88.....	248	88
205	128.....	244	134
235	98.....	270	112

Table IV
TOXIC GOITER CASES

Brachial		Femoral	
Systolic	Diastolic	Systolic	Diastolic
134	72.....	134	78
138	58.....	144	58
178	78.....	184	98
164	82.....	164	82
162	82.....	152	82
160	70.....	181	79
120	81.....	178	86
122	66.....	158	80

Table V
MR. O. E., AGE 30

	146.....	80		
	168.....	78		
	144.....	78		
	165.....	82		
Brachial			Femoral	
Systolic	Diastolic		Systolic	Diastolic
146	80.....		178	80
168	78.....		170	84
144	78.....		180	92
165	82.....		178	88

Table VI
MRS. E. S., AGE 38

Brachial		Femoral	
Systolic	Diastolic	Systolic	Diastolic
140	68.....	194	76
144	78.....	196	78
178	82.....	180	82
MRS. H. E., Age 26			
138	72.....	146	78
152	82.....	152	82
122	78.....	140	82

Dr. George Wood (Detroit): Mr. Chairman, just one item I would like to give here that might be of interest in connection with this. The paper was very illuminating and very instructive and gives food for thought. The point I would like to give is a case which I ran across a few months ago, illustrating the possibility of the variation of blood pressure between the two sides of the body. Ordinarily we assume it is the same on both sides. I saw a case which had at irregular intervals epileptoid attacks. It was a very irregular sort of a case and in taking the blood pressure one day and again the next

day, I accidentally used opposite arms and discovered such a variation of blood pressure that the next time after taking the blood pressure on one arm, in order to check up I took it on the other arm and found the systolic pressure on one side only equal to the diastolic on the other. The case never was followed through. I couldn't give any reason for it, but it is just a fact that I thought I would report. The diastolic and the systolic may step up; and then the diastolic on the other side was the same height as the systolic on the first side and from there up again.

Chairman Sladen: Is there any further discussion?

I have become extremely interested in the basal metabolic rate of these cases. I don't know whether it is possible for Dr. Vis to give us some information in regard to it. Perhaps our President in his first public appearance right after lunch in this Section can give us some information. I wish to advise you all of that fact, maybe he will touch upon that this afternoon. His subject is very akin to the one just presented. It seems to me that it is appealing at any rate. I believe no one should discuss this paper without having it in writing and giving it a great deal of thought. It is difficult to consider it, it is very fundamental, I think, but it seems to me that there must be structural differences between the brachial and femoral to account for the difference in normals. I do know in some work that I am carrying on that the basal metabolic rate and the use of oxygen there in the body have a great deal of parallel. They are not accountable for the changes in blood flow and the changes in pulse rate and the changes in blood pressure. I was quite struck with the fact that this equalization seemed to be an expression of more variability in the brachial and not in the femoral. The femoral is already an elevated pressure and, therefore, has not the privilege of being more variable, I mean it is fixed because it is high. High blood pressures can not go so much higher as low pressures can. That is a fact in handling hypertension cases which I have been interested in, determining the range of variability there is in the different elevated blood pressures. This elevation in the brachial, which has so much more chance to show itself because it is in a lower blood pressure, shows itself in those cases that seem to be more and more hyperthyroid and have more and more elevated blood pressure. At any rate his recital of the case of apprehension towards operation and then the restless night and the cases of equalization was interesting. In that one instant the patient was more basal and less hyper. Of course, I apologize for discussing the paper. I think it needs much more study, but I couldn't help saying that it appealed to me as I heard it, and it is somewhat akin to an interest of mine in my work.

Dr. F. P. Currier (Grand Rapids): I would like to ask Dr. Vis what type of stethoscope he is using and if he has found any variations in the diastolic pressure by various manipulations of the test. Personally I use a Bell stethoscope and I have noticed in some cases in older individuals with high pressure, by manipulating the stethoscope so as to compress the artery, sometimes it is possible to run the diastolic pressure down to zero and you can hear it all the way down to zero. That is a point I never happened to notice in the text books, but I don't doubt that it is there and perhaps many of you have noticed it. I should think in research work of this sort that it would be absolutely necessary to adopt a standard stethoscope and take your readings in as much a uniform method as possible.

Dr. William Vis (Grand Rapids): As regards pressures on different sides of the body, the Cyriax of England, have written a great deal about finding high pressure on one side and a lower one on the other.

I am very skeptical about the whole thing. I don't want to question Dr. Wood's observation either. We know there are certain anatomical and pathological things which will distort the pressures. Where the blood flow on one side is less than the other, such as a cervical rib or aneurysm, perhaps you can think of others, tumors, perhaps neurological things that might interfere with the blood flow on one side, there are undoubtedly such cases. Cyriax describes the influence of pleural effusion on one side, and again I haven't found it, although I have taken a great many bilateral readings.

I am very much interested, of course, in metabolism. This young man whom I have used as a sort of text here had a metabolism of only plus 30 or so when he came in. It was taken repeatedly in the same institution without his leaving the place, and the metabolism gradually came down plus to 10. All the readings, perhaps six in number, faded right down as one would expect in an excitable person.

Again taking the liberty of saying something in regard to metabolism, pulse rates, although I would very much prefer to withhold entirely, certainly until after I have heard from Dr. Jackson, I believe that our metabolism readings are given entirely too much credit. I think if we could take metabolisms 10 times a day, we would probably get eight different readings with minor variations. When I suggested this to a doctor just the other day, he said, "Well, you are not thinking of basal metabolism readings." Perhaps that is true. I was thinking of the metabolism such as it occurs in the human body without any preparation, fasting and so on, but if we take our metabolism rates time and again as we go, I think we will find a constantly varying metabolism rate, much as we find a constantly varying temperature or blood pressure reading. I don't believe a series of metabolism readings would more than correspond roughly with anything that I have in mind here, although it certainly would have to be checked up very carefully.

Dr. Currier's suggestion about hearing other sounds and hearing the diastolic at the right height is most important. If I may be so free as to venture an opinion about the phenomena which he talked about, that is not due to pressure of the stethoscope on the artery primarily. We will find certain patients where even in the arm there is no silent phase, no fifth phase according to the Korotkoff devices, the sounds never cease, even if you have no pressure on the arm at all you can still hear the arterial sound come through. We find this occurring a little more often in the leg than in the arm. One might well have spoken also of the difficulty in knowing where the diastolic reading is to be made. That I think is quite a point. I have used arbitrarily the disappearance of the sound as the most likely to be constant and heard without too much difficulty.

I believe, however, after taking hundreds of pressures that apparatus and methods of hearing are minor things. I have only used the Bell scope. I have been at this nine years, just working away at it. I believe after all these readings, the mechanism, the technic and the apparatus are all minor things. I don't quite subscribe to Dr. Sladen's idea that in a normal the anatomical considerations account for the higher femoral pressure. I have seen too many cases where it disappeared.

I might cite one case, if I may take so much of your time, one of the first patients I ever studied, a girl 16 years old who fell off a four-story building onto the street on a winter night when the roof was slippery. Having just become interested in this, I decided to take her pressure at once, and I found that her brachial pressure was 60 systolic and her femoral

was 82. She reacted to her surroundings sufficiently so that she knew she was hurt. She had two fractures of one arm and a fracture of the hip and fractures of the cranium, concussion, and so on. She promptly went into a comatose condition, and it was very interesting to note that this young lady in this comatose condition had an equal pressure in the femoral to that of the brachial, whereas when she recovered to a certain extent and became aware of her pain, the femoral pressure went up about 20 points. That is only one instance. I could tell you of many patients who never have anything but equalization, and I don't know why, excepting that they all seem to fit more or less into the endocrine type, not definitely the thyroid, hypertensive type. (Applause).

GYNECOLOGICAL DISTURBANCES OF MECHANICAL ORIGIN*

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Gynecological disturbances may be conveniently divided into several different groups, the basis for this arrangement being the etiology. Thus we have disturbances due to inflammatory causes; those due to new growths; those due to congenital defects, functional disturbances; and finally those of mechanical origin. Under this last heading are included those complaints or disturbances produced by lacerations of the pelvic floor; displacements of the uterus; postural defects not organic in type; and constipation. On first thought, one might feel that any consideration of the lesions mentioned is unnecessary and is merely a repetition of what has been discussed many times before—that, after all, a laceration is just a laceration, constipation simply constipation, postural defects nothing more or less than just that, and the treatment obvious in each instance. Any careful observer has learned, however, that the correction of a laceration or retroversion does not always result in the expected relief. This disappointment occurs only too often. Many, no doubt, have wondered why—when the lesion seemed so obvious and the repair so easy. Often one factor is secondary to the other, and symptoms attributed to one may be produced entirely by the other.

I have long felt that the many failures—complete or partial—in treating complaints arising from this group of mechanical factors has been due largely to: (1) a lack of knowledge regarding the actual production of complaints referable to this group, and (2) to the lack of understanding regarding the interrelationship which exists between these mechanical factors.

Symptoms or complaints which may be attributed to this group are numerous, often

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vague and rarely acute in type. Those most frequently heard are general fatigue, loss of pep, malaise, tired out feeling, dragging sensation, bearing down, *bachache*, leucorrhea, pain in both lower quadrants, menstrual disturbances such as dysmenorrhea, menorrhagia, etc. Many of those complaints may be made by the same individual.

In the inflammatory group the symptoms are pointed, the lesions definite, and the treatment generally satisfactory. The same may be said regarding new growths. The trouble is obvious and its removal generally means cure. Not so in the group under consideration. Here the cause is not so definite and is often overshadowed by more apparent lesions which, however, are not primary in producing the patient's complaints.

Only by a proper understanding of the mechanism of production and the relationship which exists in this group can satisfactory treatment be expected.

It is not my aim to elaborate in detail on each of these mechanical factors. Those desiring detailed study of the subject will find plenty in the literature to aid them. It is hoped, however, that the brief outline presented here will be sufficient to give a clear insight into the relationship between the mechanical factors of this group and their relation to symptoms produced.

Consider the mechanism of pelvic support. It is common knowledge that the pelvic floor, as such, does not in itself provide the entire support to the lower opening of the abdomino-pelvic cavity. Were this the case, a simple laceration would be sufficient to cause prolapse of all pelvic viscera. The actual support, of which the pelvic floor is a part, is produced by a very definite mechanism of deflecting planes. This arrangement when undisturbed maintains the normal balance of abdominal and pelvic viscera. The entire abdomino-pelvic cavity may be likened to a cylinder with a variable ceiling (diaphragm), at the bottom of which exists an arrangement of sloping or deflecting planes. These planes are arranged at different angles and slope in opposite directions. Thus, the plane of the pelvic inlet slopes down and forward. The second plane or plane of the uterus and curve of the upper sacrum slopes downward and backward. The third plane, that of the vaginal canal, pelvic floor and lower portion of the sacrum and coccyx slopes down and forward. Any force expended from above downward will be definitely diminished and taken up or diffused by these deflecting planes, (providing of course, that the cylinder is not fluid containing). Thus a certain force pressing downward will be deflected when it strikes the upper plane or plane

of pelvic inlet. This plane is actually the upper promontory of the sacrum, muscles and portions of the innominate bones. The diminished pressure is next deflected from the second or uterine plane—made up of the uterus, broad ligaments, etc., and transmitted through these structures to the third plane. Further diffusion of the force occurs at the other planes with the result that at the outlet the active force is essentially nil. Sturmdorf states that, "It is a fundamental law in dynamics that the direction of a given force or body impelled by such force impinging against a resistant plane becomes deflected in a fixed and definite direction, the degree of deflection being governed by the angle of the resisting or deflecting plane. The same law is dominant in establishing and maintaining visceral equilibrium against the displacing force of gravity and intra-abdominal pressure. But for the influence of deflecting planes, every erect female would prolapse her abdominal contents into the pelvis and out through the vagina. As the result of normal deflection, a pressure of 80 mm. in the abdominal cavity is reduced to 60 mm. at the cervix, 40 mm. in the vagina, and 20 mm. at the introitus. (G. H. Noble)."

Any disturbance in this deflecting mechanism has its counterpart in the symptoms produced. Thus, a retroversion which places the uterine plane parallel with the plane above (plane of the pelvic inlet) as well as with the one below (plane of the vagina and pelvic floor) would cause greater pressure on the remaining planes and demand more from them in the way of support. Symptoms and tendency toward prolapse would be proportionately increased. Where such disturbance is further augmented by destruction of the vaginal plane as in cases of laceration or by disturbance of the upper plane as in poor posture, even greater trouble would be inevitable.

It can readily be seen then that there must be a very important relationship between the structures forming this mechanism of pelvic support. Once this is clear the symptoms so often associated with etiological factors in this group will be more easily explained.

In this mechanism the function of the uterus or uterine plane and pelvic floor or plane of the vagina is apparent and no further discussion is necessary.

So much has been said regarding constipation that one almost feels like apologizing for bringing it into a discussion of this sort. A feeling exists that any attempt to place the responsibility for gynecological complaints on constipation is absurd. There is a tendency to ignore constipation entirely or to dismiss it with a wave of the hand. The fact that at one time most complaints were attributed to

auto-intoxication arising from constipation is undoubtedly responsible for this feeling. The reaction which is always inevitable in any extreme has now carried us to the opposite view. This is unfortunate since it tends to make the cause of many complaints obscure and difficult. The careful observer is well aware of the discomfort and trouble produced by constipation and is ready to ascribe complaints produced by it to their proper cause. Kelsey has pointed out that chronic constipation produces a definite dilatation of the lower third of the rectum. This dilatation is associated with varicosities of the bowel, broad ligaments, and congestion of the pelvic viscera, etc. Pressure forward on the cervix and traction downward on the posterior wall of the vagina are also produced, resulting possibly in a retroversion. This displacement of the uterus is probably the kind so often seen in young virgins and when associated with a straight back is considered congenital in type.

The dilated veins of the lower rectum, broad ligaments, appendages, uterus, etc., produce a dull aching sensation which is so often referred to the sacrum. Where a retroversion has existed for some time, dysmenorrhea and other menstrual disturbances may appear. The dysmenorrhea is generally characteristic in type, the ache coming on before the flow, generally preceding it by hours or days and ceasing as soon as the flow is well established. The physiological congestion imposed upon an already congested uterus and appendages results in the discomfort mentioned. Menorrhagia may be explained on the same basis, particularly the type seen in young girls. It is generally gradual in onset and varies from a slight increase in flow to a definite menorrhagia.

Backache, when complained of, is generally worse in the afternoon and at the time of the menstrual periods.

As a result of the chronic congestion occurring in these individuals, a distinct increase in glandular secretion occurs. There is often sufficient secretion from the cervical glands, to be troublesome. This is the type of leucorrhea so often associated with a general run-down condition, with no apparent local lesion of the cervix. It must be considered a symptom of general debility then as well as an indication of local pathology.

Constipation and the disturbances it may produce in the normal pelvic balance is thus seen to be quite marked and it begins often in early girlhood. It is obvious too, that correction of a retroversion occurring secondarily, as described above, would not cure the individual nor relieve all her symptoms. Retro-displacements of this kind are commonly operated upon, the individuals often returning for treat-

ment with a maze of scars—a regular geographic abdomen, giving a history resembling an encyclopedia on abdominal surgery.

No less prominent place must be assigned to postural conditions. Poor posture and its relationship to the foregoing are extremely important. It is surprising how frequently we see young women, single or married, with posture varying from fair to bad. There is slumping or accentuation of the dorsal curvature with a compensatory change in the lumbar curve. Spasm of the back muscles may be marked or totally absent. In the early stage no organic changes are noted in the back, either on physical or X-ray examination. There is flattening of the chest, the costal angle is diminished, the rib margin and the diaphragm lowered. The abdomen bulges and there is a slight pot belly and visceroptosis. Unfortunately, these individuals enjoy sedentary habits. They indulge little in outdoor exercise. There may be spasms of exercise and athletics which are often stressed in the history, but questioning generally shows the individual to be of decidedly non-athletic temperament. As a result, we have an additional factor disturbing the normal balance. The deflecting planes are further thrown out of line. Intra-abdominal pressure is increased, the circulation poorer and oxygenation proportionately worse. Congestion of the abdominal and particularly the pelvic organs is increased. Because of the sedentary habits, the poorer oxygenation and the general lessening of muscular tone, the constipation is made worse. The demand upon the remaining normal pelvic planes is greater and coincident complaints more prominent. The importance of postural defects in this study is very great.

From the foregoing, it is clear that each mechanical factor must be considered with its companions in determining the causes of patients' complaints. Each must be considered as a possible cause in producing trouble. The primary condition must be determined and corrected. But it is obvious that simple correction of one factor producing the patient's trouble, particularly if it is not the chief one, without correction of associated etiological factors, can never result in anything but incomplete and temporary relief. Any or all these mechanical factors may be the fundamental cause of the patient's trouble. Any one may appear first—others developing later. In virgins chronic constipation is generally the first to appear and is generally the root of the trouble. Retroversion and poor posture appear a little later. In multiparae lacerations and retroversions are often first. It matters little, however, so long as the primary cause is located and the relationship existing between these eti-

ological factors properly considered in the treatment.

Time and space does not permit a full discussion as to treatment. A few pertinent suggestions, however, would seem wise. Constipation is, by far, the factor most slighted. The patient is often advised to take mineral oil and eat food with roughage. This with a few added hasty remarks concludes the treatment and the case is dismissed. The condition does not seem important enough for the physician to waste his time on, yet it is just this hasty, incomplete and unsatisfactory advice that not only results in failure to relieve the patient, but also often results in the doctor's losing the patient.

It is my opinion that few women suffering from chronic constipation can be satisfactorily treated in this way. Unless physicians are willing to give the time necessary in explaining fully what these patients should do, what they should and should not eat and drink, they had better not attempt the treatment. It is surprising how obstinate some cases of chronic constipation seem to be, yet how easily they are cured by a little real interest on the part of the attending physician. Every physician knows what these patients should and should not do, but not every physician is ready or willing to give the time necessary to convey such information. In all instances where chronic constipation is considered of etiological importance, the directions to the patient should be very specific and detailed. She should be told not only what she should eat but also what she should not eat. Outline of her living habits and advice as to exercise, etc. should be made clear. Only by so doing can we expect good results.

In the postural conditions, defects of organic nature should be diagnosed and treated accordingly. In simple postural conditions, however, as seen in this group, a definite regime of exercises should be outlined. Any group of exercises which have as their aim the strengthening of the back and abdominal muscles will prove satisfactory. It is important to remember, however, that nearly all individuals in this group are very apt to fall into their old habits and unless frequently encouraged and stimulated, little can be expected. Frequent reports and demonstrations as to their proficiency in the exercises advised are necessary. Every effort should be made also to make the exercises interesting, for they are very apt to become a daily drudgery instead of a daily dozen.

Lacerations, if sufficiently severe, must be repaired and displacement of the uterus and appendages corrected by either conservative or operative means, as may be indicated in the individual case.

Any other related pathology should have

appropriate treatment. It is not intended for one moment that the conservative procedure outlined here will be a panacea for all ills in all individuals. In many, other conditions exist which require treatment. In the minds of many, the necessity for operation of some sort has become so firmly fixed that nothing short of operative procedure will suffice. This state of mind is often exceedingly hard to deal with. The doctor's patience is often tried to the limit. The patient must often be prodded into the ambition to become well, particularly if it requires expenditure of energy on her part. Seeing these patients in the proper perspective, however, will do much toward pointing out the real source of trouble. Proper consideration of all the mechanical factors mentioned coupled with appropriate treatment will rarely fail to give excellent results.

RUPTURE OF THE UTERUS AND VAGINA DURING LABOR*

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The frequency of uterine rupture during labor can only be estimated. Hospital statistics are misleading and since many women undoubtedly die of this accident without the attending physician diagnosing the condition we can only quote the text books. DeLee says that it occurs once in two thousand cases while Williams believes that it occurs more often. The large number of cases quoted in the literature, especially within the last 15 years, shows that an intense interest has been aroused in this condition, the frequency of which has been so greatly increased by the development of the Caesarian section and the use of pituitrin.

The 1st case is Mrs. B., a sextipara, 38 years of age. All previous deliveries were normal, and the patient had never been operated upon. She was admitted to the hospital at 2 A. M. August 11, 1923. At this time she was in a state of shock, pale and anxious looking, with sighing respiration and a weak thready pulse of 150. Examination of the abdomen showed the fetal parts very easily felt on the left and in the lower right quadrant was a hard firm mass which was probably the uterus. On vaginal examination there was no presenting part and the cervix was loose and flabby. There was a moderate bloody discharge. The pelvic measurements were 24—27—18—10.

Labor had begun at noon and had been quite severe throughout the day. By 6 p. m. the cervix was fully dilated. The presentation was cephalic and the head was apparently entering the inlet, at 7:30 p. m. ½cc of pituitrin was given with no appreciable progress. This was repeated at 9 p. m. The patient's pains were

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coming about every three minutes and were very strong. The uterus seemed to be pushed to the right side of the abdomen and in the hope that correction of this obliquity would aid in delivery, a tight binder was applied at 10 p. m. At 1 p. m. after several very severe pains the patient collapsed and went into shock. Her pulse was 150 and her pains had ceased. A diagnosis of ruptured uterus was made and she sent to the hospital at once. Two hours after the rupture a midline incision was made from the umbilicus to the pubic. Abdomen was found to be full of blood clots and fluid blood and a dead fetus weighing eight pounds with the placenta were lying free among the intestinal coils. These were removed immediately and the abdomen sponged dry. The rent was found to be not in the uterus, but through the anterior fornix of the vagina between the cervix and the bladder, so that properly speaking we were dealing with a colporrhexis. The tear was directly in the midline and measured about 10 cm. Apparently under the influence of a strong expulsive effort the cervix had been pulled up over the fetal head and was torn loose from the vagina and its bladder attachments, thereby causing the fetus to escape into the abdominal cavity. The broad ligaments were clamped and cut and the uterus removed except for the portion of cervix posteriorly still attached to the vaginal wall. The cervical stump was whipstitched and a drain left in the vagina. The bladder flap was utilized in peritonizing the stump and the abdomen was closed as usual. The patient did not stand the operation well and returned to bed with a pulse of 180. However she reacted quickly to stimulants and hypodermoclysis, and by the fifth day her pulse was permanently below 100. Her highest temperature was 100.4 on the third day. The wound healed by 1st intention and she was discharged on the 12th day having made an uneventful recovery.

The pathological report by Dr. J. E. Davis: The specimen consists of the uterus and adnexa. The uterus measures 15cmx14xm39cm. The cervix is approximately 6cm across the external os and shows evidence of laceration. The adnexa shows moderate edema and there is a corpus luteum in each ovary, one of which is quite small. There is a recent hematoma in the broad ligament of one side. The organ when bisected exhibits but a small amount of adhering blood clots and decidua. The musculature and particularly the peritoneum is anemic.

Microscopically there is a ruptured corpus luteum in one ovary and the vessels are congested giving the typical appearance that accompanies pregnancy. The uterine muscle contour faintly staining cell nuclei and some small round celled infiltration in perioscular positions and near the endometrium. There are decidual cells and syncytial giant cells. The blood clots in the maternal blood spaces are phylogenically infected.

Diagnosis: A case of ruptured cervix of uterus with pyogenic infection.

This then is strictly speaking, a case of rupture of the vagina and not of the uterus. However in considering the mechanics of the condition we must bear in mind that the birth canal is a muscular tube with the active contractile portion at the fundus and the passive expansile portion consisting of the lower uterine segment and the vagina. After complete dilatation of the cervix the lower uterine segment, cervix and vagina are functionally the same, they are merely passive walls of the birth canal. Consequently the etiology and even the symptoms

of rupture of the vagina and of the lower uterine segment are alike.

In this case we were dealing with a flat pelvis which had apparently been adequate to deliver her previous children, but possibly on account of a posterior position she was unable to deliver herself at this time. According to Dr. Davis' pathological examination of the specimen there was evidence of uterine disease, as shown by the poorly staining nuclei of the muscle fiber and the small round celled infiltration about the blood vessels and under the endometrium. In addition to these factors we have the stimulative action of pituitrin combined with an attitude of expectancy. To properly emulate each of these factors is difficult. We have all seen cases with smaller pelvis that have been in labor longer and where there was a mere radical exhibition of pituitrin, so undoubtedly it was the combination of all of these factors which caused the rupture in this instance. Her age coupled with the distension of the uterus by repeated pregnancies may also have tended to weaken the walls of the birth canals.

The second case Mrs. R., No. 15379, aged 25, colored a para four with a history of three normal labors entered the hospital at 7:55 p. m. At 11 the evening previous to admission she had had some uterine cramps followed by bleeding and her attending physician stated that he had given her several ampules of ergot to control the bleeding. The pains suddenly ceased and the patient went into shock. On admission she was pulseless, her hemoglobin was 25% and there were 2,400,000 R.B.C. Examination of the abdomen showed the fetus to be easily felt on the right side beneath the costal margin. No fetal heart could be heard. On the left just above the tubes was a firm uniform mass about the size of a cocoanut. Vaginal examination revealed a cervix dilated about four cm with no presenting part in the pelvis. There was a scanty bloody discharge. Her condition improved after adrenalin and saline were given. The abdomen was opened revealing a dead fetus free in the abdominal cavity together with a large amount of fluid blood. The placenta was adherent to the left side of the fundus and did not cover the os. The tear began in the lower uterine segment and extended up through the right broad ligament to the right horn of the uterus. A supraragical hysterectomy was done including the right tube and ovary whose blood supply had been damaged by the rupture. She reacted quickly with stimulation and saline under the breasts. On account of difficulty in securing a donor she was not transfused until eight hours post partum when she received 300 CC by the direct method. Her convalescence was febrile, the temperature reaching 102 on the 5th day. She was discharged on the 20th day, fever free with a pulse of 80. Laboratory examinations which were made of necessity after the operation showed her Wassermann to be negative. The cervical and urethral smears were negative for G.C. Her blood count rose and on discharge her hemoglobin was 32% and her red blood count 2,840,000. The urine showed a trace of albumen the blood pressure was 80/50 on admission. Her measurements were normal and her physical examination was negative. The fetus was 6 pounds 5 ounces and 47 long. It had apparently been dead for several hours.

Examination of the patient on discharge showed the wound to be healed by 1st intention and the cervix was high up, bilaterally lacerated and the fornices were tender.

On this case we are dealing with a ruptured uterus due to medication. It is incredible to think that a licensed physician would give ergot under such circumstances, but the information was obtained from the physician himself. Whether it was ergot or pituitrin it was probably due to the all too prevalent desire to hurry to conserve the time of the obstetrician. This is particularly common in home obstetrics where the patient is not given the protection of the supervision of a good hospital.

The third case was Mrs. M., a para 3. No. 10066, whose expected date of confinement was Sept. 10th, 1925. She had a history of two normal deliveries previously and had received no prenatal care with this pregnancy. Her membranes ruptured July 27th. Her pain began in the morning of July 30th and at 9 p. m. they were every three minutes. The position was diagnosed as Scapula left anterior. At 12 midnight after several severe pains the arm prolapsed and at 12:18 she was delivered of a still born female weighing 4 pound and 14½ ounces. During the preparation for delivery the prolapsed arm retracted and the fetus was delivered as a breech. There was a profuse hemorrhage following this and the hand was introduced into the uterus to ascertain the cause of this. The placenta was found to be separated and there were numerous blood clots in the uterus. There was an irregular rent in the lower uterine segment into the left broad ligament. This apparently did not go through the peritoneum. The patient was in shock, her pulse was 156 and she was put back to bed after being given saline and adrenalin. Her pulse gradually grew weaker and she finally died without rallying three hours after delivery. Application for autopsy was refused.

In discussing the etiology of rupture of the uterus and vagina there are several points which must be considered. In the first place we have factors which weaken the birth canal, and the most important of these is the Caesarian section. The best statistics on this subject have been collected in England by E. L. Holland who reported that of 479 Caesarianized patients who subsequently became pregnant, 18 had rupture of the uterus at the site of old scar, an incidence of 4.3 per cent. Considering that 336 had a second Caesarian and 42 aborted, we find that 79 delivered themselves naturally and 18 had a rupture of the old scar. In the face of such statistics it takes courage to allow a patient to deliver herself when one is in doubt about the integrity of her scar.

However, it must be remembered that these are statistics from all kinds of operators and under all kinds of conditions. Undoubtedly in our private practice our individual results would be better. Thus Findley, after an exhaustive review of all cases reported, concluded that with the proper technic in the suture and absence of infection, not over 2 per cent will rupture at a subsequent labor. A uterus which is properly sutured is in much less danger of rupture than one which is carelessly closed. The uterine musculature like all contractile tissue,

retracts when cut, and interrupted or carelessly placed sutures will not approximate the cut edges. For this reason we feel that it is best to use layers of continuous cat gut which may be reinforced by interrupted sutures including the whole thickness of the uterus muscle.

Holland finds that uteri closed with silk showed a smaller incidence of rupture than those closed with catgut. His cases covering this point however, are too few from which to draw conclusions. He further reports that the chief factor weakening the scar is infection. This prevents muscle regeneration and results in a scar which is thin and filled with fibrous tissue. Such a scar is further weakened if the placenta becomes attached at that point. Abnormal distension of such a uterus produced by twins or hydramnious further increases the danger of tearing the old scar.

Other types of scars in the uterus must be considered as possible cause of rupture. Myomectomy, excision of the uterine end of the tube, weakening of the walls due to vigorous curettment or manual removal of an adherent placenta, scars from extensive lacerated crevices and scars from a previously ruptured uterus may all be causes of this condition.

Material disease such as fibroid will weaken the muscle. In abruptio placentae, a condition usually associated with maternal nephritis, we have a hemorrhagic condition of the musculature which will weaken the wall and may result in rupture. Adherent retroversion with a saculation of the anterior uterine wall, pregnancy in a uterus which has been utilized to support the bladder as in the interposition operation for prolapse, and saculation of the posterior uterine wall in anterior fixation operations have all been reported as a cause of this condition.

Abnormalities of the fetal membranes occasionally weaken the uterine walls. Hydatid mole and chorio epithelioma are characterized by the fact that the fetal membranes erode through the uterine musculature and thereby predispose to rupture. Placenta previa likewise causes a further weakening of an already thin portion of the uterus.

The second group of factors which predispose to uterine rupture are those which obstruct the birth canal. Here we must consider first of all contracted pelvis. The mechanics of this is obvious and need not be more fully dealt with here.

In this category we also have scars of the cervix as a result of previous operation, cancer of the cervix, scars of the vagina from previous deliveries, tumor of the vagina, tumor of the pelvis obstructing the birth canal.

Next we come to the various contributing factors and among these we have malpositions

of the fetus. Full presentation, transverse, brow and mentosities need only be mentioned to call to our minds the danger of neglecting to deliver them properly at the right time. More important, however, under this heading is the posterior position. One in five deliveries according to the texts, and a large per cent, according to our personal experience, were originally posterior. Most of our difficult cases are due to this error of rotation and it is the worst treated of all our obstetrical complications, because it is largely unrecognized by the general practitioner. It is probable that in the first case under discussion we were dealing with a posterior position.

Then we have the influence of medication. Ergot is no longer used during labor but undoubtedly it has caused its quota of trouble and apparently it was the cause of rupture in numerous cases. Pituitrin has become the second largest factor in the etiology of rupture of the uterus. A wonderful time saver for the busy practitioner, it was seized upon with the utmost zeal by most men when it was first introduced but before long an ever increasing number of tragedies were placed to its account, until finally there are those who discredit its use entirely before delivery. Used indiscriminately in large doses, as it is even in this day, it will sooner or later land the obstetrician into trouble.

Another contributing factor which must be considered is meddlesomeness. Many of the cases in the literature have been caused by the mid-wife attempting to deliver cases of dystocia. Most of these are so infected that the mothers either died before surgery was attempted or succumbed to peritonitis a few days later. Version in a dry uterus with a tetanically contracted Bandl's ring is one of our most dangerous, major obstetrical operations. Even surgical anesthesia does not relax this and all of us have felt a contraction ring so tight that it is impossible to pass the hand up into the uterus. It is in these cases that a threatened catastrophe can be averted by a skillful application of forceps, an art which is falling into disrepute in this day of Caesarian sections and indiscriminate versions. Careless application of forceps may include the cervical lip in the blade and the resulting tear may extend into the broad ligaments or even into the peritoneal cavity. Bags used in the induction of labor may cause a malposition or, as a result of inaccurate insertion, may injure the uterine wall. Stiff bougies or tampons inserted for the same purpose must all be considered from the standpoint of the damage they may do to the uterus. Over distension of the uterus due to hydramnios or multiple pregnancy and injuries to the abdomen have been reported as causing rupture.

Usually we have two or more of these influences combining in the causation of any one case but the vast majority are accounted for by Caesarian scars, the indiscriminate use of pituitrin, meddlesomeness and prolonged expectancy in cases of disproportion or malposition.

In considering the pathology of rupture of the birth canal we find that the location of the rupture depends largely on the etiological factors involved. We may have a complete rupture, the condition in which the tear extends through the peritoneum and in which the fetus together with the placenta is found among the intestinal coils, or we may have the incomplete form in which the tear extends into the broad ligament but not into the peritoneal canal. In the first case the symptoms are usually more severe due to loss of blood. In the other instance the leaves of the broad ligament make the hemorrhage either smaller in amount or slower in developing so that the symptoms are not so urgent.

The rupture may be either in the fundus, the lower uterine segment or in the vagina. Rupture of the fundus is usually the result of previous Caesarian section, although other operations on the uterus may so weaken its walls that under the influence of uterine contraction the scar breaks. Degeneration of the muscle fibers as in the abruptio placentae may cause fundal rupture.

Tears due to disproportion, malposition, pituitrin or prolonged expectancy are usually in the lower uterine segment because normally it is the weakest portion of the birth canal. The firm muscular fundus unless diseased, practically never ruptures, but the thin walls of the lower segment under the influence of strong pains acting against an insurmountable obstacle, gradually becomes thinner and finally tear. The increase in the use of the low double flap, Caesarian will undoubtedly swell the number of these cases, although Dr. Lee claims that it does not weaken the uterine wall. This will be determined statistically in the future.

Finally the tear may be located in the vagina. To this classification our first case belongs and it is apparently the most rare of the various types of rupture, since we have been able to locate only eight cases in the literature in the last 12 years. The tear may be either anterior between the cervix and bladder or posterior into the pouch of Douglas. Three cases were anterior, three posterior, in one the vagina was completely torn off except for a small bridge laterally and in one the location of the rupture is not stated. In our case the tear was anterior and the fetus and the membranes were expelled from the uterus into the vagina and up anterior to the bladder into the abdominal cavity. Fortunately the bladder was not in-

jured, but the vaginal branches of the uterine arteries were torn on both sides, thus accounting for the large amount of hemorrhage.

In those cases where there has been a rupture of a scar there are two very important factors to consider, first infection and second the method of suture. Infection with collections of pus along the suture line results in failure of muscle regeneration and we get a thin fibrous scar in which there may be no muscle tissue between the endometrium and the peritoneum. Furthermore if the muscle fibres are not accurately approximated and there are collections of blood or serum in the wound we get a similar failure of muscle regeneration and consequently a weak scar. On the other hand perfect approximation plus absence of infection give a firm union which is so filled with regenerated muscle fibres that rupture at such a point is next to impossible. However, we can never be sure that infection is absent so that while we may reduce the number of ruptured scars by careful attention or technic, we will be faced with the specter of a possible break in our previously Caesarianized uteri.

Failure of muscle regeneration makes the thin scar the ending point of numerous muscle fibres. When these contract as they do in labor these ends are all pulling away from their old point of union. In other parts of the uterus this is not the case because wherever a muscle fibre ends there is sufficient reinforcement by numerous other fibers which do not end. So as labor progresses the tension on the scar increases until it finally gives way.

The tendency toward thinning of the scar is further increased if it is retroplacental. In 33 of 50 cases quoted by Holland the placenta was situated over the scar. This is due to the fact that the retroplacental portion of the uterus hypertrophies more than the rest of the organ and scar tissue has little or not capacity for hypertrophy. The result is a further thinning and very early separation of the placenta at this point which increases the tendency to tear. Also when the placenta is over the scar there is an infiltration of syncytial tissue and decidua cells which have practically no tensile strength and consequently we have another factor in weakening the wall at this point.

In cases where there is no scar in the uterus we will often find areas of degeneration or necrosis possibly secondary to advancing age or multiparity or both. In others a fibrosis of the uterus has been reported, undoubtedly secondary to a chronic metritis, such as we have evidence of in our case. When the rupture usually occurs over the placental site and in addition to the microscopical evidence of degenerated muscle fibers and small round celled in-

filtrations we have an infiltration of the muscle with syncytial and decidua cells.

The symptoms of rupture of the uterus vary considerably, depending upon its location and the size of blood vessels that are torn. They are less urgent in those cases where there has been a previous tear because of the paucity of blood vessels. This applies to the previous Caesarianized cases and also to those which have been reported where there was a repeated rupture of the uterus, or where a previously severely lacerated cervix was converted into a rupture at a subsequent labor. In some of these cases the fetus is not extruded from the uterus or any part of it escapes and here again the symptoms are less dynamic. Where the rupture is into the broad ligament the symptoms may be masked because the loss of blood is not very marked. This is likewise the case when the rupture is associated with delivery through the normal passage such as might follow a version and extraction. Here the symptoms are commensurate with the loss of blood, but we must bear in mind that the hemorrhage may be intraperitoneal and consequently concealed. Before the rupture occurs there are usually some very definite premonitory signs. The patient is anxious and restless complaining of constant pain over the lower abdomen. The pulse is increased and occasionally there is a slight elevation of temperature. At the time of rupture there is a severe sharp tearing pain and a sensation of something giving way. The pain ceases, the patient becomes pale and breaks out with a cold sweat, the respiration are shallow and rapid and the pulse goes up. There are violent movements due to asphyxia and then all motion ceases. There may or may not be bleeding from the vagina, so this should not be used as a criterion of the amount of blood lost. If large blood vessels are torn the patient may die of hemorrhage unless operated upon. Usually, however, the drop in blood pressure which is coincident with the hemorrhage allows the blood to coagulate and checks the bleeding before it is fatal. In our first case over two hours elapsed from the time of rupture until the operation was performed, and during this time she was moved from her home to the hospital. In the second case it was at least eight hours before the patient was operated upon. Consequently the hemorrhage must have been spontaneously arrested before treatment was instituted. In our last case the patient's condition never warranted any operative interference.

Examination of the patient with threatened rupture will often reveal the main etiological factor such as a neglected transverse presentation or a contracted pelvis. The uterus is tense and tetanic and we can often feel a ridge across

the lower part of the uterus, the contraction ring of Bandl, which marks the line of separation between the lower uterine segment and the fundus. Rectal or vaginal examination reveals a presenting part more or less definitely felt depending on the presentation and degree of engagement.

The picture is almost as variable after the accident as it was before. Our first patient was in a state of collapse, without pain and only slight external bleeding. The fetus in both instances could be easily outlined close to the abdominal wall while in the lower quadrant on the opposite side was the firmly contracted uterus. Vaginal examination revealed a collapsed soft cervix and no presenting part in the pelvis. In some instances the tear can be felt from below and occasionally omentum or intestines are found prolapsed in the vagina. If internal hemorrhage is severe we may get shifting dullness in the flanks. In the less dynamic cases we get variations from this classical picture.

In the third case we had the transverse presentation in which a prolapsed scar midline disappeared followed by the birth of the head, probably at this moment tore through a weakened lower uterine segment. Patient went into shock and never rallied.

The most difficult cases to diagnose are those which complicate the various obstetrical operations. We are all familiar with the shock that occasionally follows a forceps delivery or a version, and occasionally this condition simulates rupture of the uterus. This point is differential diagnosis will only come if these deliveries have been effected from below. But in such cases if the patient goes into shock it is very important to know just what we are dealing with. The amount of external hemorrhage may be large or small in either shock or rupture. In rupture we may get shifting dullness in the flanks but a positive diagnosis may not be made unless we explore the interior of the uterus with the hand.

Abruptio placentae is differentiated by the usual coincident occurrence of nephritis and hypertension and by the tense board like uterus. We must bear in mind that we may have both placental separation and uterine rupture in the same case.

Apart from the rarity of full term ruptured ectopic pregnancy we have the history of the patient and the palpation of a tear in the large pregnant uterus while in ectopic the cervix is closed and the uterus, if it can be distinguished, is quite small. A placenta previa with brisk hemorrhage may be associated with collapse but the examination quickly reveals a fetus in the uterus and the placenta can be felt over the os.

The prognosis depends on whether the rupture is complete or incomplete and whether it

occurred at the site of an old avascular scar or through the uterine musculature. In incomplete rupture with delivery from below both mother and child may often be saved, provided hemorrhage is controlled. In complete rupture the child is rarely saved unless operation is performed immediately. In rupture of old scars when the fetus is not expelled from the uterus we may also obtain a living child. The maternal prognosis is better especially in the incomplete ruptures. The cause of death in the fatal cases is hemorrhage and infection, some mothers dying before operation from loss of blood and shock. Many of our cases have been manipulated from below and despite prompt and efficient surgical intervention they die of peritonitis. Wolff reports a fetal mortality of 60 per cent and a maternal mortality of 26 per cent in rupture of the uterus following Caesarian section as contrasted with a 47 per cent maternal mortality, in ruptured uteri from other causes, thus clearly illustrating the more serious nature of a tear through unscarred muscle.

In discussing the treatment of this condition we must bear in mind the pathology. In complete rupture with the fetus and placenta in the abdominal cavity immediate laparotomy is indicated. It is possible in many instances to suture the uterus and save the organ but this is not to be recommended for two reasons. In the first place such a uterus is probably infected and merely increases chances for developing peritonitis. In the second place its value is questionable even if the patient does recover. Snow reports a case where the uterus ruptured on three different occasions in the same patient. Our first case showed evidences of infection in the uterine musculature, consequently we believe that the operation of choice in these cases is hysterectomy. Removal of the uterus effectively checks hemorrhage, removes a possible focus of infection and sterilizes a patient in whom subsequent pregnancy would be dangerous.

In incomplete rupture we must be guided by conditions. If there is extensive tearing into the broad ligament with severe hemorrhage it can be controlled best by hysterectomy, although it may be possible to pack the cavity and check the hemorrhage in this manner. Many of the milder forms of incomplete rupture undoubtedly take care of themselves. Without question some of the cases of unexplained death after delivery are due to unrecognized uterine rupture. Such patients will occasionally fail to react to ordinary stimulants and will die before we can get them into shape to stand a severe abdominal operation.

In 1910 Boreo reported a conservative method of treating the cases where the uterine contents

were delivered from below. He advised clamping the edges of the tear with forceps and overlapping them, followed by packing the uterus with gauze and removal of the clamp in three days. Intra-uterine suture of the rent has also been used with success but it is technically a very difficult task and is not a method for general use. For the reasons stated above we believe that this is not a method which will meet with general approval.

But important as it is for the specialist to be fully conversant with and capable of utilizing all the methods of treatment, it is far more important for the general practitioner to acquaint himself with the methods of preventing this condition. Adequate prenatal care with pelvic measurements is essential as well as careful examination of the patient at time of delivery and an accurate diagnosis of position. We must use pituitrin carefully in small doses, and only when the cervix is fully dilated with a normal presentation and an adequate outlet. This valuable drug has fallen into disrepute due to indiscriminate use. Another point which must not be overlooked in the prevention of rupture is undue delay in delivery. If the cervix is completely dilated with no advance despite strong pains there is an obstruction to delivery and an accurate examination must be made to determine the cause of this delay. The exhibition of pituitrin under such conditions is deplorable.

Patients who have been previously subjected to Caesarian section should be carefully sutured. If the indication for the first section is a permanent condition there should be no thought of another test of labor. In case the pelvis is normal and the previous indication is no longer present there are several things to be considered before allowing the patient to attempt labor. If the convalescence from the previous section was affable we probably are dealing with a firm scar, provided the uterus has been properly sutured. In such cases as this we feel that the chance of rupture while undoubtedly present is fairly remote and one would be justified in risking such a labor when the patient is in a hospital where all facilities are at hand for an immediate laparotomy if necessary. Within the past two years we have examined the wounds of ten previously sectioned uteri and in all but one case the scar was so well healed that it was recognized with difficulty. The one weak scar was in a patient who had a stormy febrile convalescence.

In conclusion then we may say that rupture of the uterus or vagina is usually a preventable condition and adequate obstetrical care will avoid many of these deplorable accidents. The mortality is exceedingly high even with the best of care and good results in treating this condi-

tion are due to absence of infection as well as prompt surgery.

BIBLIOGRAPHY—LITERATURE

- Spontaneous Rupture of the Uterus During Labor—B. Ragma, *Clin. Obstet.*, 1924, XXVI, 54.
- Report of a Case of Rupture of the Uterus—A. N. Wiseley and G. C. Bradfield, *Ohio State M. J.* 1924, XX, 358.
- Rupture of the Uterus—D. S. Hillis, *Surg. Gynec and Obst.*, 1924, XXXIX, 32.
- An Unusual Accident During Delivery at Term—B. H. Matrin and A. S. Brinkley, *Va. M. Month.*, 1923, L, 457.
- Spontaneous Rupture of the Lower Uterine Segment—D. S. Pracy, *Brit. M. J.* 1923, II, 1200.
- Uterine Rupture; Parro's Operation; Recovery—Audebert and Fousnier, *Bull. Soc. D' Obst. Et de Gynec de Par.* 1923, XII, 589.
- A Critical Review of Fifty-three Cases of Rupture of the Uterus Following the Use of Hypophyseal Preparations—L. Pouliot and J. Fruchard, *Rev. Franc de Gynec. et Obst.* 1923, XVIII, 145.
- Report of a Case of Rupture of the Uterus—R. H. Dunn, *Va. M. Month.* 1923, L, 253.
- Rupture of the Uterus During Labor—E. De Bella, *Riv. d. ostet e ginec. pract.*, palmero, I 529, Nov. 1923.
- Rupture of the Uterus and death of the mother following the use of pituitrin—Marvin Pierce Rucker and Charles Cleves Haskell, *Rev. Franc. de gynec et d'obst.*, Paris XIX, 65; Feb. 10, 1924.
- Pregnancy and Spontaneous delivery in a case with uterus ruptured during previous labor—Guiseppa Collosi, *Rev. D' ostet e ginec. prat. Palermo*, V, 507, November 1923.
- The indications for total ablation in certain cases of rupture of the uterus—H. Van Ortenberg, *Zentralb f gynaek*; 1922, XVI, 1070.
- Rupture of the Caesarian Scar in Pregnancy or Labor—E. Holland, *J. Obst. and gynec.*, *Brit. Emp.*, 1921, XXVIII, 488.
- Report of a case of rupture uterus resulting from the use of pituitary extract—W. A. Dorland, *J. Am. M. Ass.*, 1922, LXXVIII, 191.
- Rupture of the uterus during the first stage of labor—W. A. Swayne, *Surg. Gynec. Obst.*, 1922, XXXIV, 257.
- A clinical and anatomical study of 51 cases of repeated Caesarian section with especial reference to the healing of the cicatrix and to the occurrence of rupture through it, J. O. Ganble, *Bull. John Hopkins Hosp.* 1922, XXXIII, 93.
- Slight pelvic stricture; Rupture of the vagina; the cervix and the lower portion of the uterus, following the manipulations of a midwife. Extraction of the foetus and hysterectomy; Recovery—Le Roy des Sarres—*Bull. Acad. de Med Par.* 1922, LXXXVII, 455.
- Two cases of extra-peritoneal rupture of the lower uterine segment—H. C. Williamson, *Am. J. Obst. Gynec.* 1921, II, 91.
- Rupture of the Uterus, treatment by gauze packing. Recovery—J. F. Anderson, *Med. Press.* 1920, N. S. CXIX, 479.
- Two cases of rupture of the vagina during labor—A. C. Palmer, *Proc. Roy. Soc. Med.*, Lond., 1920, XIII, Sect. Obst. and Gynec, 151.
- Rupture of Caesarian Scar in Subsequent pregnancy and labor—E. Holland, *Laucet*, 1920 CXIX, 591.
- A case of spontaneous rupture of the uterus following pituitrin—A. W. Bourne, *Proc. Roy. Soc. Med. Lond.*, 1920, XVI, Sect. Obst. and Gynec., 205.
- Ruptured uterus in a previously Caesarianized patient, with the report of a case where the foetus remained intact within the membranes following rupture—C. J. Kirkham, *Boston M. and S. Jour.* 1920 CLXXXIII, 602.
- On the Rupture of the Caesarian Section in subsequent pregnancy and labor—E. L. Holland, *Med. Press.*, 1920, N. S. CXIX, 394.
- Abruptio Placentae associated with spontaneous rupture of the uterus—Phanenf, *Surg. Gynec. and Obst.*, 1919, XXIX, 575.
- Rupture of the uterus occurring twice in the same patient—E. L. Cornell, *Surg. Gynec and Obst.* 1919, XXIX, 574.
- A conservative method of Treating Uterine Ruptures—L. A. Chambarro, *Semana Med.* 1918, XXV, 755.
- Report of a case of Ruptured Uterus through a Caesarian Scar—E. W. Layard, *Calif. State M. J.* 1919, XVII, 109.

Complete rupture of a Caesarian Scar in Subsequent pregnancy—F. A. Dorman, *Am. J. Obst.*, 1919, LXXIX, 670.

Intra partum rupture of the uterus—Ronzy, *Am. J. Obst.*, 1919, LXIX, 842.

Some Scattering Remarks on Obstetrics with a report of these cases of rupture of the uterus.—N. C. Hunter, Charlott M. J., 1919, IXXX, 1.

Rupture of the uterus—R. Y. Sullivan, *Am. J. Obst. N. Y.* 1918, LXXVIII, 589.

Complete uterine rupture, peritonitis; suture and drainage; Recovery—R. Gandolfo and A. Acampo, *Rev. Argent. de obst. y gynec.* Buenos Aires, 1918 II, 408.

Rupture of the uterus through a Caesarian Scar—E. Novak, *J. Am. Med. Ass.*, 1918, LXXI, 105.

Rupture of the Uterus—N. S. Heaney, *Surg. Gynec. Obst.* May 1918.

Intra partum rupture of the uterus and bladder; Recovery; Subsequent closure of vesical fistula—G. T. Tyles, Jr., Boston M. and S. Jour. 1918, CLXXIX, 599.

A case of Caesarian Section complicated by Rupture of the Uterus—C. W. R. Grossland, *Brit. Med. J.* 1917, II, 790.

Combined rupture and inversion of the uterus—A. Brindeau, *Arch. Mens. d'obst. et de gynec.* Par. 1917, VI, 193.

Spontaneous rupture of the uterus during labor. Uterine Fibroma—T. M. Garcia Parra, *Gac. Med. de C'aracas*, 1918, XXV, 40.

Two cases of rupture of the uterus following Caesarian Section with living children—A. B. Davis, *Am. J. Obst.*, 1918, LXXVII, 136.

The causes and Surgical aspect of rupture of the uterus during labor—E. G. Zurke, *Tr. South. Surg. Ass.* St. Augustine, 1917, Dec.

Treatment of uterine ruptures during labor by Borro method—E. Mazzini, *Semana Med.* Buenos Aires, 1917, XXIV, 85.

Rupture of the uterus—W. A. Scott, *Am. J. Obst.*, N. Y., 1917, LXXVI, 423.

Spontaneous Rupture of the uterus—J. H. Telfair, *Am. J. Obst.*, N. Y., 1916, LXXIV, 491.

Results from Pituitary Extracts in Obstetrics with the report of a case of Rupture of the Uterus following its use—M. J. McNeile, *Am. J. Obst. N. Y.*, 1916, LXXIV, 432.

Rupture of the Uterus—A. M. Hellman, *Interant. J. Surg.*, 1916, XXIX, 358.

Report of a Case of rupture of the uterus: Sepsis. Operation. Recovery—R. B. Hall, *Am. J. Obst.*, N. Y., LXXIV, 492.

Complete Rupture of the uterus at term without hemorrhage or shock. Recovery of both mother and child—T. E. Neille, *Am. J. Obst. N. Y.* 1917, LXXV, 235.

Traumatic Rupture of the uterus and Bladder in labor: Recovery—H. J. Boldt, *Med. Rec.* 1917, XCI, 653.

Traumatic Rupture of the uterus and Bladder—H. Aranow, *Am. J. Obst. N. Y.* 1917, LXXV, 865.

Spontaneous Rupture of the uterus and Pulmonary Embolism—Snooks, *J. Obst. Gynec. Brit. Emp.* 1918, XXII, 358.

Spontaneous Rupture of the uterus following administration of pituitary extract—A. Werlenbaker, *J. Am. M. Ass.* 1917, LXVIII, 1612.

Rupture of the uterus following the use of Pituitrin—W. F. Grosvenor, *Surg. Gynec. & Obst. N. Y.* 1917, LXXVI, 50.

Complete Intraplaccental Rupture during labor—J. M. Stoddard, *J. Ind. State M. Ass.* 1915, VIII, 420.

Rupture of the uterus sustained during Version. Unrecognized until prolapse of intestines 48 hours later—T. H. Cheny, *Med. Rec.* 1916, LXXXIX, 576.

Rupture of the uterus during labor—J. H. Telfair, *Am. J. Obst. N. Y.* 1916, LXXIII, 655.

Rupture of the uterus—Sullivan, *Am. J. Obst. N. Y.* 1916, LXXII, 655.

A case of complete rupture of the uterus during labor—F. P. Fouche—*South African M. Rec.* 1915, XVII, 20.

Report of a Case of Spontaneous Rupture of the uterus—R. McPherson, *N. Y. State J. Med.* 1915, XV, 400.

Three cases of complete rupture of the uterus during delivery—J. F. R. Scheult, *Lancet*, London, 1915, CLXXIX.

An unusual case of rupture of the uterus during delivery—A. Solowij, *Zentralbl. J. Gynak*, 1915, XXXVII, 623.

Rupture of the uterus during labor. Report of a spontaneous case—J. W. Long, *Am. J. Obst. N. Y.* 1914, LXX, 20.

Rupture of the uterus occurring at three different times in the same patient—Snoo, *Trans. Meded. gynae.* ges. Jan. 1913.

Case of rupture of the vaginal fornix during labor—A. E. Bjorkenheim, *Zentralbl. F. Gynak*, 1913, XXXVII, 269.

Rupture of the uterus in Scar left by Caesarian Section—Wolff, *Ztsch. F. Gebursh. gynak*, 1914, LXXXV, 740.

A case of rupture of the uterus during pregnancy—Halle, *Deutsche Gesellsch. f. Gynak*, May, 1913.

A case of extensive Rupture of the utero-vaginal junction with the escape of the Placenta into the peritoneal cavity—Bannister, *Proc. Roy. Soc. Med.* 1913, Obst. and Gynec. Sect. 237.

ENDOCRINE AMMENORRHEA*

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It is rational to presume that the majority of ammenorrheas have an endocrine basis. While the ovaries play the chief role in the production of the menstrual cycle, they are in turn dependent to a definite extent upon the normality of the other interrelated glands, principally the anterior lobe of the pituitary, the thyroid, and to a lesser degree, if any, upon the adrenal cortex and pineal. Therefore, the hormonal imbalance producing an ammenorrhea may be either primary, i. e., dependent on a pure hypogonadism; or, secondary, i. e. a primary insufficiency of the interrelated glands and consequent hypofunction of the ovaries.

At present hormonal symptoms have been developed which enable us with very little difficulty to make specific endocrine diagnoses. These symptoms involve principally, body structural changes, metabolic disturbances and neighboring signs, as outlined in a previous paper. Hence to logically classify the end results of clinical investigation and so that our therapy be specific we must determine from our clinical survey, including history, physical and laboratory findings, what gland is at that time at fault. While it is true that single gland dyscrasias are rare, a correlation of the above finding will nearly always demonstrate one gland as the outstanding cause of the general incretory dyscrasia and treatment is directed principally toward this gland. At present specific therapy is impossible, except in a few instances, and rational treatment must be directed toward those glands which have a synergistic action.

The recent work of Allan, Doisey and Pratt may soon evolve a practical and specific ovarian hormone. They have evidently succeeded in animal experimentation in producing the estrual cycle and characteristic histological signs in the genital organs of the castrated rat and this treatment, consisting of injections of extract is at present being applied in clinical experi-

mentation. Smith and Evans in their work on the anterior lobe, by an injection of their extract into the peritoneal cavity of animals also have produced the estrual cycle and it is my understanding that it, too, is being used under clinically controlled cases.

The future for specific endocrine therapy is, indeed, bright if they succeed in isolating an active ovarian and anterior lobe hormone and it will supplement our armamentarium, along with that of thyroxin and insulin. But, at present, as stated above, glands or extracts with synergistic actions is the method of choice rather than inert specific extracts.

CASE REPORTS

Case 1—Miss M. N., Age 33.

Primary ovarian insufficiency and thyroid extract intoxication.

Chief Complaint—Fatiguability. Scant menstrual flow.

History—Former periods four to five days, four napkins daily, now uses but one. Fatiguability most pronounced following her period. Onset at 16. Never regular, had dysmenorrhea until operation performed four years ago. For past four years has been losing her hair which was thick and curly and full of lustre and is now thin, dry and straight. Headaches, occipital and basal, since onset of ammenorrhea. Palpitation since taking thyroid extract. Has taken five to six grains daily for three or four months and has become extremely nervous. This was done without the consent of her physician. Began to put on weight when her periods became scant. Previously weighed 125 pounds. In four years gained up to 162 pounds. Stated that most of her weight was mammary and trochanteric. Since taking thyroid extract has lost most of her weight in these regions. Present weight 137 pounds.

Family History—Mother and two maternal aunts went into menopause before the age of 40.

Physical Examination—Asthenic type, five foot five inches, disproportion between trunk and extremities. Hair scant and dry. Mammary show signs of loss of weight. Finger nails brittle, break easily.

Treatment—Anterior lobe extract, ampoules one intramuscularly, three times a week. Ovarian substance ampoule one, three times a week. Ovarian substance grains three, four times daily. Her physician states that after four months treatment there is no change evidenced in the menstrual flow.

May 1923.

Case 2—Mrs. P., Age 26.

Thyropituitary insufficiency.

Chief Complaint—Ammenorrhea.

History—Onset at age of 14. Regular, 28-day type. Duration three or four days. Four years ago the flow became scanty and irregular, three to six months intervals. Coincident with ammenorrhea obesity developed. Weight at 18 years was 115 pounds. Between the ages of 20 and 21 gained 50 pounds.

Physical Examination—Measurements normal. Moderate scleroderma. Pituitary type of obesity, pelvic and pectoral girdle obesity marked, mammary not marked. Otherwise negative.

Treatment—Patient was treated at intervals for the past three years. While on substitutional therapy with pituitary body and thyroid and pituitrin, intramuscularly, her periods promptly returned with regularity. When treatment is withdrawn the ammenorrhea and obesity return.

November 1924.

Case 3—Mrs., Age 28.

Primary Ovarian Insufficiency. With obesity.

Chief Complaint—Complete ammenorrhea, 11 months.

History—Onset at 14. Regular until 11 months ago. No periods since. Previously 21-day type interval with seven-day duration, moderately profuse. One child, nine years old. Ectopic 1918. June 30, 1925 was operated for acute appendicitis. Examination at that time showed both tubes and one ovary had been removed. In 1918 had pneumonia complicated with empyema. Since then three rib resections have been done. Following a closure of the chest in 1923 the patient began to take on weight, from 140 to 185 and ammenorrhea began.

Physical Examination—Measurements are definitely eunuchoidal. Span 68. V to S 29½. S to S 34. Marked trochanteric and mammary obesity. Otherwise negative.

Treatment—Anterior lobe and ovarian substance, ampoule one, each intramuscularly, three times a week. Followed in one month by three-day period. This patient has had regular periods for one year with the exception of an interval of two months when treatment was stopped. After treatment was again instituted, periods returned.

December 1925.

Case 4—Miss E. H., Age 15.

Subthyroidism.

Chief Complaint—Irregular periods, enlarged neck, Skin condition for six months which cleared up with treatment. Onset at 14. Period in December none until May then August. First period lasted three days, others one-half day and scant.

History—Normal birth, eight pounds, fleshy and fat. Walked at 18 months, talked at 12 months. Began to lose weight after 18 months old. Not strong after weaning, was bottle fed baby. Last few years fairly healthy.

Family History—Mother is anterior lobe type, father probably pituitary type.

Physical Examination—Weight 100. Height 59½ in. S to S 30, V to S 29½, Span 28½. Skin dry and scaly, especially of the legs. Subthyroid facies, lips prominent, fingers short and blunt, small feet and bowing of elgs. External genitalia well developed. Axillary and public hair well developed also hair growth marked on forearms, upper lip, less on lower limbs. Mammary well developed. Thyroid is diffusely enlarged especially isthmus and right lateral lobe. Basal metabolism rate minus 23%.

Treatment—Thyroid desiccated, as high as six grains a day. Ovarian substance and anterior lobe, intramuscularly. After second month of treatment patient gained weight with a return of regular menstrual flow which has continued. Thyroid and ovarian therapy by mouth are continued.

December 1925.

Case 5—Miss G., Age 32. Primary Ovarian Insufficiency.

Chief Complaint—Scant and irregular menstrual flow Gastro intestinal disturbance and pain in right lower quadrant.

History—Periods always scant. Onset at 16. Duration one-half day, barely enough to stain a napkin.

Physical Examination—Eunuchoidal type. No obesity. Tenderness in right lower quadrant (patient operated for appendicitis with relief of all gastro-intestinal symptoms, at that time uterus and adnexa were examined. The uterus was of infantile type, the ovaries apparently normal.)

Treatment—Ovarian extract and anterior lobe, both by mouth, intramuscularly, and intravenously. Was

given for four months with no change in the menstrual flow.

January 1926.

Case 6—Mrs. P., Age 28.

Primary Ovarian Insufficiency. No obesity.

Chief Complaint—Inability to become pregnant. Premenstrual backache and headache. Periods lasting one day, and scant. Onset at 16, regular, 28-day type. Married four years. No pregnancies.

Physical Examination—Eunuchoidal type. -No obesity. Slight fullness of the thyroid, small nodule in isthmus.

Referred her to Dr. Henderson to determine patency of tubes. Tubes found patent, uterus and adnexa normal.

Treatment—Ovarian extract and anterior lobe by mouth and intramuscularly. First period, entirely free of headache and backbone. No increase in flow. Second and third periods slight increase in flow, lasted two days. No treatment for one month and flow is again scant and subjective symptoms returned.

The secondary type of amenorrhea at this writing presents the best prognosis, especially the so-called thyro pituitary type. Thyroid

extract alone will rarely produce results, but when combined with pituitary extract results are usually better. This type generally has an associated so-called pituitary or thyroid obesity.

In the so-called primary ovarian insufficiency, treatment with either the present ovarian products alone, or, combined with synergistic glands, little or no results are secured as far as the menses are concerned, but often associated subjective symptoms are relieved by therapy. In primary ovarian insufficiency associated with characteristic trochanteric and mammary obesity believe that in a certain percentage amenorrhea can be corrected, because, in my opinion the secondary metabolic disturbances of the ovary as evidenced by obesity can be corrected by diet and the ovaries activated by thyroid, and anterior lobe extract. With the disappearance of the ovarian obesity, frequently, the menses are reestablished.

PUBLIC HEALTH ACTIVITIES

Edited By

MICHIGAN DEPARTMENT OF HEALTH

THE TIME FACTOR IN BIOLOGIC PRODUCTS

It is not generally known that *time* is a most important factor in the preparation of biologic products. The idea that any given product may be prepared in the laboratory in a relatively short time and put, with due precautions, into suitable containers ready for use is prevalent. The ordinary idea that might be expressed is that products dependent on bacterial growth would require some four or five days to prepare, perhaps, and that serums prepared by animal inoculation might take even as long as five or six weeks.

But the results secured by such casual speculation do not at all agree with the facts. Let us bring out the point by using a specific example,—diphtheria antitoxin. Off-hand calculation might give us something like this: Made by injection of toxin into horses; hence a week to make toxin, plus six weeks for immunizing the horse, plus a week to test and fill the product,—total eight weeks. And some, not stopping to calculate at all, might even be surprised at this period of two months.

Now let us consider the facts. To produce antitoxin one must first have toxin. Diphtheria toxin is not a product which may be prepared by following a recipe from a book. It requires a method which will give reasonably consistent results in the hands of the user, and this method may take months to acquire. Even

then there may be failures, or perhaps a series of failures. Toxin has been made for 30 years, and yet it is not known just why it may be potent one time and not the next, or potent in the hands of one man, and not potent in the hands of another presumably following exactly the methods of the first. Because of the uncertainty, each lot of toxin must be relatively small,—one cannot prepare it in hundred gallon lots like vinegar or sauerkraut or such fermentation products. It may take six months to acquire a method, and another six to put in stock a sufficient amount to be worth while, a safe minimum, and also to make sufficiently sure of one's method to be reasonably sure of continuous maintenance of supply. Let us allow enough good fortune so that at the end of a year we have a supply of toxin and are producing it successfully.

But toxin having a certain potency when made does not retain that potency. Normally there is a deterioration which is at first rapid. Hence the product must be given time to stabilize, perhaps six months. At the end of the year supposedly we have some toxin which is six months old, but very little. Hence it would be unreasonable to start too fast, for should one fall short of good stable toxin one is completely and effectually blocked. An animal half immunized will not stay half immunized while one takes time out to prepare to finish the process. Three months beyond the year is not enough to

put one on safe ground, but let us say three months for argument's sake.

Thus far we have consumed fifteen months. Then we start animal immunization. With good luck we may bleed for plasma containing antitoxin two months later,—seventeen months. One cannot bleed too much at a time without injury to the animal. Hence one continues bleeding and immunizing periodically before one has any quantity of plasma,—another two months,—total thus far, nineteen months. But the antitoxin, as the toxin, must age to become stable, requiring another six months,—twenty-five. Then it must be concentrated and the undesirable proteins removed so far as possible, a two weeks' process. Then it must be tested for potency,—another week. It must be filled into syringes, and tested for sterility, adding another week,—a grand total of at least twenty-six months, or *more than two years*.

And even so, all stages of procedure have been assigned a minimum rather than even a normal allotment of time. In other words, the first steps in the production of a syringe of antitoxin used in October, 1926, may have been taken as long ago as the summer of 1922, and must have been taken at least as long ago as the summer of 1924. And the next presidential campaign will be over before the antitoxin, the first steps in the production of which are now being taken, is used.

Similarly, Schick test material requires toxin, and toxin-antitoxin mixture requires both toxin and antitoxin. Furthermore, toxin-antitoxin mixture requires thirty-five days to test for potency, both where made and in Washington, where check tests are made, not to mention the variable time consumed in making "test mixtures," or small lots of varying proportions of toxin and antitoxin to determine the proper proportions to use, which may be thus and so one month, and different the next; for no biologic product is perfectly stable. Other products are similarly dependent on *time*, including scarlet fever products at which wonder has been expressed as to why such have not been put out by the Department.

Thus one runs continual risks of accidents which will upset months of work. One must know months in advance, when possible, about unusual demands for any product,—for all carry "expiration dates" beyond which they must be carefully rechecked for potency or discarded. Ideally the supply should exactly meet the demand. For therapeutic products, estimates must be based on (1) previous demand, and (2) epidemiologic data. For other products, such as toxin-antitoxin mixture or Schick test material, one can estimate somewhat on the above points, but immunizing campaigns can

to some extent be foreseen, and the earlier notice is given the better.—M. S. M.

DIPHTHERIA OUTBREAK IN ROYAL OAK TOWNSHIP

At 4:00 a. m. Sunday, June 6, the State Department of Health was notified that there was a serious outbreak of diphtheria in Royal Oak township, Oakland county. A request was made for immediate assistance as the supply of diphtheria antitoxin had been depleted and the people were panic stricken.

Antitoxin was dispatched from Lansing by a state motorcycle officer who arrived in Royal Oak by 9:00 a. m. A medical inspector from the Michigan Department of Health arrived on the scene the same day and took charge of the situation.

Two cases of malignant laryngeal diphtheria had occurred, one a school girl of 8 years, the other a preschool child of 6 years. Neither of these children had ever had toxin-antitoxin; however, it is to be noted that the two sisters of the preschool child had had toxin-antitoxin about five months before and neither of these girls developed diphtheria. Of the two cases, both died within thirty-six hours of the onset of noticeable symptoms and within four hours from the time they were first seen by a physician. The development of symptoms was so rapid and severe that antitoxin administration proved of no avail. With rigid quarantine measures and the administration of over 700,000 units of antitoxin to contacts, the outbreak was stopped without the development of a further case.

The probable source of infection in one case, Edna W., is interesting from an epidemiological standpoint. A girl, Carol C., age 8, was the only contact of Edna W., from whom a positive virulent diphtheria culture was obtained. Carol and Edna were classmates and sat near each other in the schoolroom. Carol had never had diphtheria but there was a history of recent infection in her family. Her brother, Merl, age 3, had had a double mastoid operation about eight weeks previously. Two weeks after returning home from the hospital, Merl's brother, Joseph, age 6, developed diphtheria. Investigation of these cases developed the fact that Merl's ears were still discharging pus, which on culture yielded a diphtheria-like organism which was, however, non-virulent. Except in this family, no other cases of diphtheria have occurred in this neighborhood for several months.—P. F. O.

FACTS AND FADS ABOUT DENTISTRY AND HEALTH

We are hearing a great deal today about teeth in relation to health. What everyone

wants to know is: How much of it is fad and how much fact? We all know that only a few years ago, even in most serious diseases, the physician looked at the tongue but ignored the teeth even though they might be reeking with filth and infection. Today he may refer the patient to the dentist even in the most minor ailments, though the mouth and teeth look reasonably good. Why the change, and is it just a fad, or is it based on reason?

We know also that the treatment of disease has had much in it that was whimsical and superstitious in the days gone by, and that even in our boasted scientific age we are not free by any means from such ideas—as the blazing signs and alluring promises so evident today well testify. It is also well known that the practice of the healing art is becoming more and more intelligent and scientific. Much investigation has been and is being given to the cause of disease and the great watchword in health programs today is prevention.

It is in this realm of causes of disease and prevention that teeth today play so important a part. When it is discovered that rheumatism, neuritis, heart disease, kidney disease, etc., are often caused by absorption of infection from other portions of the body, it was recognized that infections in the mouth could not be ignored.

Now what are the facts concerning diseased mouth conditions? Examination of all classes of people show that it is tremendously common. Examination of school children usually shows 85 to 90 per cent with diseased teeth and 25 per cent with definite infection draining down the throat 24 hours of the day. Children in the kindergarten 4 or 5 years of age already frequently have very bad mouth conditions.

Examination of all the boy scout troops in a city of 100,000 showed 90 per cent with decayed permanent teeth, and some of these boys were sons of physicians and dentists.

These are facts and can be duplicated almost anywhere if a careful school examination is made, unless there has been an efficient dental program in force for some time. It involves no stretch of the imagination to believe that such conditions are not healthful. Demonstrations in many different places independent of each other have shown beyond a doubt that bad mouth conditions in school children lower the resistance of the child and make it more susceptible to any disease, cause absences from school, poor school work, and often, retardation in grades, in addition to frequently causing serious disease from the infection absorbed.

Superintendent Sutton's experiments in the Atlanta, Georgia, schools are a notable example and come from a school man and not a dentist. The draft board examinations gave ample

evidence of bad mouth conditions among adults.

These are the facts,—what are some of the fads?

Some dentists and physicians, seeing the splendid cures effected upon the removal of diseased teeth, have made of this a fad and advised removal without proper diagnosis. There can be no doubt that many teeth have been sacrificed needlessly. In this connection we have the X-ray faddist who diagnoses the presence and extent of dental infection from radiograms alone and glibly consigns certain teeth to the forceps from evidence which may be entirely misleading. On the other hand, some tooth conditions affecting health seriously make no showing on a dental film. It is certainly true that dental diagnosis can not be made from X-ray alone.

Another fad is the great exploitation of all kinds of tooth pastes, powders, mouth washes and pyorrhea cures, each one promising to prevent decay or cure pyorrhea. Most of them are harmless, although the tooth whiteners are dangerous and may ruin good teeth, but they all have little virtue in proportion to the wonderful claims made for them.

Another fad is the slogan, "A clean tooth never decays." This has led to undue emphasis on the tooth brush, powders, pastes, etc., and the cleaning of teeth rather than early filling, as a preventive of decay. It has produced many times a false security and has had the leading place in too many school programs. Cleaning teeth has value and should by all means be encouraged, but unfortunately, it can only prevent decay to a very limited extent. The important preventive of decay is early filling, and nothing we know of today can take its place.

The message we must get across to parents, prospective mothers, teachers, nurses and all health workers is this: Decayed teeth lead to infection and infection is dangerous to health. It is just as dangerous in baby teeth as in permanent ones. Tooth decay and infection are tremendously prevalent. The only known preventive is early filling and this is most successful and economical when the tiny cavity is filled before it can be seen except by a careful examination with mouth mirror and probe. Hence the importance of having the teeth examined by a dentist just as soon as erupted and, if necessary, filled. This means 2 to 3 years of age for baby teeth and starting at 6 years for permanent teeth.

The most misunderstood factor in dental care today, and the most important, is that about 90 per cent of the molar teeth erupt with cavities in them. This is not saying that they come through decayed, but that they come through with tiny holes in them, and decay always starts

were debris can lodge. The tooth brush cannot clean out these tiny pits and fissures. Decay often progresses very rapidly when once the teeth come through the gums and, on this account, they are frequently decayed to the dangerous stage before it is discovered.

The teeth may be of excellent quality, but Nature didn't quite fuse the enamel junctions and so they come through with pit and fissure cavities, too small to see without examination with mouth mirror and probe, but not too small for decay to start and ruin the teeth unless filled.

We do not believe it possible to stress this too strongly. While we hope our research departments in dentistry and medicine will find out what causes these tiny pit and fissure defects, and how to prevent them, they have not done that yet and until they do, the practical thing is to prevent decay and infection by early filling. It is the only method we are sure of today.

We also know the importance of diet and nutrition in producing and maintaining good teeth. Hence we should stress the importance of the diet of the pregnant woman, nursing mother and, thereafter, of the child, as a contributing factor.

Facts, as distinguished from fads, give the only sound basis for a mouth hygiene program.

—W. R. D.

September reports in the Bureau of Child Hygiene and Public Health Nursing show that 22 counties received some type of public health nursing service during the month.

The Supervisor of Midwives, Bertha Cooper, worked in Emmet, Cheboygan, Charlevoix, Antrim, Bay and Ogemaw counties.

Four nurses taught Little Mothers' League classes, Gertrude Linsell in Monroe County, Bertha Brown in Kalkaska and Missaukee, Martha Giltner in Sanilac and Catherine Eoll in Schoolcraft.

Women's classes in infant care were conducted in Chippewa County by Dr. Rhoda Hendrick and Mrs. Vera Smith. Annette Fox, Director of the Upper Peninsula Nursing District, worked in Mackinac, Chippewa, Kalkaska, and Missaukee counties, while Esther Nash, Supervisor of the Lower Peninsula Nursing District, visited Sanilac, Iosco, Otsego, Lenawee, Montmorency, Crawford, Roscommon, Missaukee and Clare counties.

Two nurses, Katherine Kreizenbeck in Newaygo County and Bertha Karkau in Osceola, reported on the demonstration prenatal programs in progress in those counties.

A total of 123 towns in 43 counties were visited by engineers from the Bureau of En-

gineering during September. Assistance given included investigation or consultation on public water supplies, sewerage or sewage disposal, stream pollution, general sanitation, roadside water supplies, railroad water supplies, and highway camps. Counties visited were in both upper and lower peninsulas.

PREVALENCE OF DISEASE

	September Report		Sept. 1925	Average 5 years
	Cases	Reported		
	Aug. 1926	Sept. 1926		
Pneumonia	114	112	185	153
Tuberculosis	462	509	632	460
Typhoid Fever	75	129	153	191
Diphtheria	326	370	224	538
Whooping Cough	625	517	651	412
Scarlet Fever	273	321	353	493
Measles	231	78	71	105
Smallpox	40	12	17	45
Meningitis	9	6	9	9
Polio-myelitis	13	25	20	97
Syphilis	1,211	1,198	1,444	1,041
Gonorrhea	784	987	1,142	1,067
Chancroid	5	11	13	14

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health
September, 1926

	+	-	+-	Total
Throat Swabs for Diphtheria				901
Diagnosis	33	395		
Release	126	240		
Carrier	1	89		
Virulence Tests	8	9		
Throat Swabs for Hemolytic Streptococcus				330
Diagnosis	59	182		
Carrier	15	74		
Throat Swabs for Vincent's	22	404		426
Syphilis				5695
Kahn	949	4668	62	
Wassermann	4	9		
Darkfield	1	2		
Examination for Gonococci	238	1761		1999
B. Tuberculosis				1374
Sputum	505	855		
Animal Inoculations	3	11		
Typhoid				313
Feces	28	140		
Blood Cultures	6	45		
Urine		11		
Widal	20	63		
Dysentery				126
Intestinal Parasites				16
Transudates and Exudates				136
Blood Examinations (not classified)				543
Urine Examinations (not classified)				200
Water and Sewage Examinations				522
Milk Examinations				88
Toxicological Examinations				17
Autogenous Vaccines				6
Supplementary Examinations				195
Unclassified Examinations				707
Total for the Month				13594
Cumulative Total (fiscal year)				41556
Decrease over this month last year				6905
Outfits Mailed Out				14243
Media Manufactured, c.c.				1013517
Typhoid Vaccine Distributed, c.c.				2600
Diphtheria Antitoxin Distributed, units				23080000
Toxin Antitoxin Distributed, c.c.				31110
Silver Nitrate Ampules Distributed				5112
Examinations Made by Houghton Laboratory				1547
Examinations Made by Grand Rapids Laboratory				1711

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

PUBLICATION COMMITTEE

J. D. BRUCE, Chairman.....Ann Arbor
B. F. GREEN.....Hillsdale
B. H. VAN LEUVEN.....Petoskey

Editor and Business Manager

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Grand Rapids, Michigan

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The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

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NOVEMBER, 1926

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Michigan.

Editorials

POST-GRADUATE CLINIC, UNIVERSITY HOSPITAL NOV. 11-12-13

As announced in the October Journal, an intensive, Post Graduate Clinic, conducted under the auspices of the State Society will be held at the University Hospital, Ann Arbor, on November 11, 12 and 13th. The detailed program is attached hereto.

This clinic is for our members. There are no fees. The subjects discussed will be enhanced by clinical demonstrations. There will be no operative work. Practical methods and measures will be enlarged upon. In the two and a half days every moment of the program will be consumed with intensive presentation of the subjects announced. The field will be covered as fully and thoroughly as possible.

On the first evening there will be a dinner at the Michigan Union, followed by addresses by President Little, President Jackson, Dean Cabot and Regent Sawyer. On the second evening there will be addresses by Morris Fishbein, M. D., Editor of The Journal of the A. M. A.

Enrollment: In order to perfect clinical work we must know how many of our members will attend. The rule is established that no admissions to clinics without enrollment. A letter containing an enrollment card has been mailed to every member. Please return this card before Nov. 6th. On arrival in Ann Arbor an admission card will be given, to each member who has enrolled, at the main entrance of the University Hospital on the morning of November 11th.

Doctor, your State Society is providing this clinic for your benefit. The opportunity presents whereby you may receive instruction in practical methods revealing medical progress. You will be enlightened by much that will be of vast assistance in your daily work. Problems that have annoyed you will be clarified. Certainly you cannot afford to forgo this opportunity. Decide to attend. You will be well repaid.

PROGRAM

Thursday, November 11th

Welcome to Profession, Dr. Haynes.

- 9:00 a. m. Pre-Natal Clinic, Dr. Peterson.
- 9:30 a. m. Fractures, Dr. Badgley.
- 11:00 a. m. Neurological Diagnosis, Dr. Camp.
- 12:00 a. m. Surgical Technic, Dr. Bailey.

Methods of preparation of patients, preparation of the field and post-operative care and treatment.

12:30 Luncheon.

- 1:30 p. m. General Surgery, Dr. Eberbach.
- 2:30 p. m. Nephritis, Dr. Newburgh.
- 3:30 p. m. Genito-Urinary Surgery, Dr. Cabot.
- 4:30 p. m. Heart, Dr. Wilson.
- 7:00 p. m. Dinner at the Michigan Union.

This will be an informal dinner and not a banquet. Opportunity afforded for fraternal mingling. After the dinner there will be short addresses by Dr. Jackson, president state society; Dr. Sawyer, regent; Hugh Cabot, dean university; C. C. Little, president university.

Friday, November 12th

- 8:00 a. m. Practical discussion of Medical Procedures, with demonstration, Dr. Youmans.
- 9:00 a. m. Pediatric Clinic, Dr. Cowie.
- 10:00 a. m. Psychiatric Problems in Private Practice, Dr. Barrett.
- 10:30 a. m. Obstetrics and Gynecology, Dr. Peterson.
- 11:30 a. m. Upper Respiratory Infections and Pneumonia, Dr. Canfield and Dr. Bruce.
- 12:30 Luncheon.
- 1:30 p. m. Management of Eye Conditions in General Practice, Dr. Parker.
- 2:00 p. m. Acute Abdominal Conditions, Dr. Cabot.
- 3:00 p. m. Dermatological Clinic, Dr. Wile.
- 4:00 p. m. Management of Stomach and Gall-Bladder Disease, Dr. Field, Dr. Youmans, Dr. Hickey and Dr. Bruce.
- 7:30 p. m. (In Natural Science Auditorium), Dr. Fishbein.

This will be a general meeting to which there will be invited members of the resident staff of the hospital, nurses training school, students in the dental and medical departments of the university.

Dr. Morris Fishbein, editor of the Journal of the American Medical Association, and;

Invitation has been extended to an additional distinguished speaker.

Saturday, November 13th

- 8:00 a. m. Use of Ultra-Violet Rays and Diathermy in University Hospital, Dr. Pohle.
 9:00 a. m. Head Injuries, Dr. Peet.
 10:00 a. m. Clinical Pathological Conference, Dr. Warthin, department of medicine; Dr. Hickey, department of surgery.

All clinics will be held in the hospital amphitheatre except the Clinical Pathological conference, which will be held in the pathology amphitheatre.

Daily demonstrations in X-ray, pathological and clinical laboratories, out-patient departments and wards of the hospital.

HONORARY MEMBERS TO HOUSE OF DELEGATES

The House of Delegates elected the following as Honorary Members. They were duly notified by the appended letter. Acknowledgments will be found in "Among Our Letters" in this issue.

HONORARY MEMBERS—ELECTED 1926

106th Annual Meeting

Ottawa County

J. A. Mabbs, Flatiron Bldg.,
Muskegon, Mich.

Kent County

Ralph H. Spencer, 91 Monroe Ave.,
Grand Rapids, Mich.
D. Emmett Welsh, Powers. Theater Bldg.,
Grand Rapids, Mich.

Muskegon County

J. T. Cramer, 114 14th St.,
Muskegon, Mich.
Paul A. Quick, Landreth Bldg.,
Muskegon, Mich.
John A. Stoddard,
Muskegon, Mich.

Wexford County

David Ralston,
Cadillac, Mich.

Ingham County

F. A. Jones,
123 W. Allegan St.,
Lansing, Mich.
Robert E. Miller, Tussing Bldg.,
Lansing, Mich.

Wayne County

Eugene Smith, Professional Bldg.,
Detroit, Mich.
John E. Clark, Shurley Bldg.,
Detroit, Mich.

St. Clair County

G. S. Ney, Meisel Block,
Port Huron, Mich.
Charles B. Stockwell, 533 Water Street,
Port Huron, Mich.

Marquette County

T. A. Felch, Sellwood Block,
Ishpeming, Mich.

September 23, 1926.

Dear Doctor:

I have the distinct honor and personal privilege of advising you that at the 106th Annual Meeting of the Michigan State Medical Society, held in Lansing on September 14, 15 and 16th, the House of Delegates unanimously elected you as an Honorary Member of our State Society.

This honor and distinction comes to those beloved members of our profession who by reason of their years of professional life service and organizational affiliation have reflected credit not only to themselves but upon the Society.

It is therefore a distinct pleasure that I have of officially advising you of this action and to enroll you as one of the Honored Members of our Society.

Your sincerely,

Secretary-Editor.

GO TO IT WAYNE

Wayne County Medical Society just completed a successful year as evidenced by the committee reports published in a recent number of their Bulletin. These committee's dealt with smoke abatement, Membership Committee reporting a membership of 1,389 active resident and honorary members. The Public Education Committee that conducted 162 public meetings with an 29,000 lay attendance. A Program Committee that provides for all meetings. A history committee controlling a library of 22,192,219 volumes. An Ethics Committee called to function seven times. A Clinical Bulletin daily listing all hospital work that listed 30,386 operations during the year. A Cardiac Committee supervising special cardiac clinics. And a dozen or so other Committees, Council, Trustees, Editor, etc. All revealing progress and sustained activity that is commendable.

But now comes the following announcement that bids well the inauguration of a new era and new enthusiasm:

NEW SOCIETY HEADQUARTERS

As was announced last week, the Wayne County Medical Society is to have new quarters, which will be in the new Maccabees Building on Woodward at Putnam. It is intended that the move be made about January first. The facilities to be afforded by the new quarters should be of interest to all society members.

First in interest is the auditorium. We shall have access to a splendid first floor auditorium, seating about 800 people and equipped with a special ventilating system. The society quarters will be on the 11th floor where a fine office for the secretary will be attached to a capacious council room fitted out with luxurious furniture. Committee rooms are provided. One small dining room will be fitted up for card playing and a larger one will be available for general use. In addition to these two dining rooms the society will have two beautiful gardens situated over the tenth floor and adjacent to the other rooms. These roof gardens will overlook the library and art center.

The Detroit Physicians' Business Bureau will still have quarters with us. Coatrooms and washrooms will be attached to the suite. These quarters will be served by six high speed elevators and two freight elevators. The nature of the building is well known. Suffice it to say that it is considered to be Albert Kahn's masterpiece.

The new quarters will have the advantage of central location and good parking facilities. The expense of upkeep will be materially lower than at present. All service will be furnished by the building. The dining room service will be provided by a caterer; however,

a special kitchen which the society will equip will make it possible to operate independently of caterers if this appears desirable.

The trustees are to be congratulated of negotiating for these greatly improved quarters, and on managing so as to reduce society expense.

C. E. D.

That's why we say—Go To It Wayne! There is no reason why you shouldn't establish a world's pattern. We congratulate the men who heretofore have contributed their time and effort in making the Wayne Medical Society what it is today. They labored honestly and unselfishly and we know they will continue to carry on. The sad part is that they number but about 200 of the total membership of 1,389. There are 1,000 members who drifted along, reaping from the labors of these active men. If 500 of your drifters would quit being idle and lazy. If 500 of you would discontinue your retarding efforts that manifests itself by your very lassitude and so prevent greater momentum. If 500 of you knockers would become boosters—Well, if 500 of you Wayne men would join the boys who are working—the world would be yours. To you we say, the opportunity confronts you—Get busy. Come forward and offer to help, do some of the work, lift some of the load and capitalize your opportunity. At least you can attend the meetings, and by your presence, occasional applause and boost, speed on the boys who are doing things. Certainly you don't need to have your head shoved into the trough before you appreciate how splendid and good the fodder is! Step up and help the officers and committees enrich it still greater.

Again we say, Go to It Wayne—assume and hold the position as an outstanding medical center of this world. It awaits you, you are on your way—there is no reason to fail if 750 are determined to work to that end during this society year. We bid you every success and are pulling strong for you. If the Journal can help, whisper it and we will go the limit—Go to It Wayne!

MINUTES OF THE OCTOBER MEETING OF THE EXECUTIVE COMMITTEE OF THE COUNCIL OF THE MICHIGAN STATE MEDICAL SOCIETY

The monthly meeting of the Executive Committee of the Council of the Michigan State Medical Society was held in Ann Arbor at the Michigan Union at 2 p. m., Tuesday, October 5th, 1926. There were six present: Chairman Stone, Drs. Bruce, LeFevre, Corbus, Warnshuis, Ex-president Darling and Executive-Secretary Smith.

No. 1. Dr. Olin, state health commis-

sioner, appeared before the Executive Committee and discussed with the Executive Committee questions of administration and legislation relating to the health work of the state, requested the opinion and advice of the State Society in certain health activities. The Executive Committee conveyed to Dr. Olin their appreciation for taking up his plans with the State Society. Dr. Olin outlined to the Executive Committee the plan of securing desired health legislation and agreed to have it ready for discussion at the legislative meeting that is to be held in Lansing in connection with the Ingham County Medical Society.

The Executive Committee also expressed the opinion to the health commissioner that no attempt should be made during the coming legislature to secure the re-establishment of the 50c fee for reporting births.

On motion of Bruce and LeFevre, the Executive Committee conveyed to Dr. Olin that it would gladly review evidence against doctors guilty of violations of health regulations and would aid him in securing cooperation from the violators of these regulations before prosecution was resorted to.

No. 2. Upon motion of Bruce, Corbus, the secretary was directed to proceed with the details connected with the administration of the \$2,000 appropriation for activities to further conserve the health of the people of this state.

No. 3. That the committee to be appointed by the president in conformity with the resolution produced in the House of Delegates by W. J. Cassidy of Detroit should be instructed to consider the duties of the committee, to consist of "the establishing of a definition of the word charity as applied to medical and surgical service and also to survey the hospitals of this state in regard to the development of charity work or what is interpreted as charity work and to report to the House of Delegates a general plan that may be recommended to hospitals to govern them in the admission and care of people who are entitled to free medical service."

No. 4. On motion of LeFevre, Corbus, the secretary was directed to perfect the organizations in County Societies of the Red Cross Emergency teams and to keep a file of these organizations so that they may be available should an emergency ever arise.

No. 5. The secretary was instructed to arrange the program for the Ingham County Medical Society legislative meeting and to invite to that meeting representatives of the State Tuberculosis Association, State Board of Registration, Commission of Health, Michigan Hospital Association, and

our legislative committees of County Societies. He was also instructed to invite Dr. Woodward, Secretary of the Board of Legislation and Legal Medicine of the American Medical Association to be present and address the meeting.

No. 6. The Executive Committee discussed the plans for the Post-Graduate course in Ann Arbor on November 11th, 12th, 13th and was instructed to extend an invitation to Dr. Fishbein to address one of the evening sessions. It was the expression of the committee that President Jackson and Dean Cabot should preside at the several sessions and that a dinner should be arranged for on the first evening to which President Little should be invited.

No. 7. The secretary was instructed to convey to our representatives in congress the society's opinion upon the four bills now pending in congress.

No. 8. Upon motion of Corbus, Bruce, the secretary was instructed to secure the Beaumont tablet to be placed on the monument at Mackinaw Island in connection with our next annual meeting.

No. 9. Upon motion of LeFevre, Corbus, the secretary was instructed to send check for \$100 to Dr. Darling to reimburse him for the contribution to the expense account of the Joint Committee on Public Health Education.

No. 10. Upon motion of LeFevre, Bruce, January 12th was selected as the tentative date for the midwinter session of the Council.

No. 11. The Executive Committee will hold its next meeting on the evening of November 10th at Ann Arbor unless the legislative meeting of the Ingham County Society occurs before that date.

No. 12. The Executive Committee reviewed the work that was being done in the secretary's office and informally discussed several proceedings of society activity.

No. 13. The Executive Committee adjourned at 5:30 p. m.

F. C. Warnshuis,
Secretary.

PRESIDENT'S APPOINTEES UPON COMMITTEES

President J. B. Jackson, announces the following appointments for membership upon our Permanent and Special Committees:

Dr. J. H. Charters of Detroit is appointed to the Committee on Public Health, taking the place of Dr. Frank A. Kelly who becomes a member of the Committee on Legislation and Public Policy. Dr. C. S. Gorsline of Battle Creek is reappointed for a term of five years upon this committee, and Dr. R.

C. Mahaney of Owosso becomes chairman of the committee.

The Committee on Legislation and Public Policy, the president appoints Dr. A. H. Haze of Lansing as chairman to fill the unexpired term of Dr. B. M. Davey, and Dr. Frank A. Kelly of Detroit is appointed as a new member of this committee, his term expiring in 1931.

The Tuberculosis Committee, the president reappoints Dr. B. A. Shepard of Kalamazoo as a member of this committee and designates him as chairman of the committee.

The Committee on Venereal Prophylaxis, the president appoints Dr. W. F. Martin of Battle Creek for a term of five years and Dr. Martin becomes chairman of this committee.

The Committee on Medical Education, the president appoints Dr. Hugh Cabot of Ann Arbor, his term expiring in 1931.

The Committee on Civic and Industrial Relations, the president reappoints Dr. C. D. Munro of Jackson, his term expiring in 1931.

The Joint Committee on Public Health Education, the president reappoints the secretary of the state society, Dr. F. C. Warnshuis, for a term of five years.

The Special Committee on Medical History of the State, created by action of the House of Delegates at the Lansing meeting is constituted by the president as follows: Dr. J. G. R. Manwaring, Chairman, Flint; Dr. J. H. Dempster, Detroit, and Dr. W. J. Kay, Lapeer.

The president has reappointed the entire personnel of the Committee on Nursing Education to serve for another year.

In regard to the other special committees credited by the House of Delegates, one being for the organization of a Women's Auxiliary and the other to investigate charity at the University Hospital, the president desires further time before announcing the personnel of these two committees.

As we have stated in previous editorials, from year to year, these committees are not mere ornaments of our organization. They are intended and must be active working groups, accomplishing the duties that are assigned to the committee and which formulate the basis for their existence. To that end do we once more urge, at the president's insistence, that the chairmen of these special committees begin now to become aggressively active in achieving the aims for which their respective committees are created.

A list of our standing committees and officers of our state organizations may be found each month published in the front advertising form of the Journal.

SAGINAW COUNTY MEDICAL SOCIETY INITIATES PLAN FOR PUBLIC HEALTH EDUCATION

The Saginaw County Medical Society through its committee on Public Health Education has developed a program of work which augurs well to lead the way for all other societies in the state. The plan has the approval of the entire membership of the society, the public, and the Saginaw News Courier.

The co-ordination of the medical profession, the public and publicity agencies signifies the entrance of a new era in the field of scientific medicine. Such accomplishment is possible in each county of Michigan.

The following news story and editorial from the Saginaw News Courier describe the plan of action and indicates the support of the public and the daily newspaper.

Education of the public in the value of preventive medicine—in the taking of precautions against the common communicable diseases most prevalent among children—is the object of a plan approved Wednesday evening by the Saginaw County Medical Society at October meeting.

The plan, including the placing in every physician's office of a supply of pamphlets dealing with the preventive measures advised by the medical profession, these pamphlets to be distributed to the general public, will be put into effect within a few days, as soon as the pamphlets have been printed.

The plan was adopted by the medical society, according to its officers, after a careful study of methods used in all the larger cities of the country. The pamphlet contains the medical professions recommendations regarding preventive measures to be used as safeguards against smallpox diphtheria, whooping cough, typhoid fever and scarlet fever.

BRAIN SURGEON SPEAKS

"This work," said one of the society's officials "is another phase of the effort the medical profession and health boards are making toward public health education."

A feature of the meeting was the technical lecture of Dr. Max Peet, professor of brain surgery at the University of Michigan, on "The Management of Skull Fractures." Miss Helen Albano, in charge of the city health department's pre-natal clinic, told the physicians how the work of the clinic is designed to co-ordinate with that of the physicians, and gave the doctors an outline of the plan for the clinic's activities.

The text of the pamphlet to be distributed through the physicians' offices follows:

"The medical profession is interested in preventive medicine. The following information regarding the control of contagious diseases has been very carefully assembled and the methods described below are those approved by our best medical authorities and recommended by the Boards of Health of all major cities. Any contra-indications to treatment will be best recognized by your family physician.

SMALLPOX

"Vaccination should be done as soon as possible after the child is one year of age. Complete immunity from a single vaccination may last a life time, but more

often it may diminish so that vaccination should be repeated about every five years. Probably the best plan is for vaccination at the age of one year and repeated before the child enters the grades.

DIPHTHERIA

"Children should be protected against diphtheria after passing the age of one year. Susceptibility to diphtheria may be determined by the Schick Test. Under ordinary circumstances it has been found practical to omit this test for children under seven or eight years of age since the percentage of susceptibility at this age is so very high. Later in childhood as immunity develops the Schick test may be used. Toxin-antitoxin given at weekly intervals for three weeks usually protects a child indefinitely and probably for life. This protection is not immediate but develops gradually during the next few months. Six months after the toxin-antitoxin has been given the Schick test may be done in order to determine the status of immunity. If diphtheria develops in your home immediate immunity may be given your family by a single injection of anti-diphtheria serum which will protect your children for a period of about six weeks.

WHOOPIING COUGH

"While the results are not uniform many physicians believe whooping cough vaccine to be of considerable value in both the prevention and treatment of this disease. It may be given to children exposed to the disease, and in cases of suspicious cough should be used promptly as the treatment is more satisfactory when used early in the disease. Since the use of the vaccine has become more general it has seemed that fewer pneumonias and other complications have been noted. The treatments are usually given on alternate days for three or more injections. The immunity produced is usually not of long duration.

TYPHOID FEVER

"This disease is largely one of youth and early adult life, being rarely seen in infancy and only occasionally during early childhood. There is little danger of this disease if the milk and water supplies are carefully watched. Immunization for typhoid and para typhoid may be accomplished by three injections of vaccine, given at weekly intervals. We especially recommend these treatments for children when cases of typhoid are present in the neighborhood or when a milk or water supply has been proven to be infected. It is very important that protection against typhoid be given to children before allowing them to enter summer camps or other activities where the food and water supplies may be in question, and in any case by the time of puberty. There is no contraindication to using the typhoid prophylaxis much earlier in childhood if it seems best.

SCARLET FEVER

"The Prophylactic treatment of scarlet fever is still in the experiment stage. We are not as yet recommending treatments, although it is probable that within a short time we will be able to safely recommend a means of immunization. In case scarlet fever breaks out in your neighborhood or your children are directly exposed to the disease, there is considerable evidence to show that a single injection of anti-scarlet fever serum will protect them for period of from three to five weeks. Whether or not the serum should be used in your particular case should be left to your family physician.

SUGGESTIONS

"1. Two weeks after recovery from a contagious disease, take your child to your family physician for a careful examination, including analysis of the urine.

2. Before the beginning of a school year have your family physician give your children a complete physical examination, including analysis of the urine.

3. After being vaccinated, receiving toxin-antitoxin or other prophylactic treatments ask your doctor for a certificate showing dates of treatment."

PREVENTION OF DISEASE

Preventive medicine is making decided advance in this country and is now very generally practiced, at least in the larger cities, everywhere giving in results achieved proof of its value. It is a policy which is receiving a most commendable measure of support from the medical profession, and, designed as it is to add to public safety, it should unquestionably receive the earnest co-operation of all interested in safe-guarding health, which naturally ought to include the entire community.

This preventive medicine is specially valuable in safe-guarding children, who cannot do such things for themselves and who are dependent upon their elders, more particularly their parents, for suitable care along the lines indicated. Which gives added importance to the announcement made by The News Courier, of Thursday last, that the Saginaw County Medical Society has approved a plan to educate the public in the value of effort to prevent the common communicable diseases most prevalent among children.

part of the plan is the distribution from offices of the physician members of the society of pamphlets dealing with preventive measures tested by practice and very wide experience, as well as indorsed by the profession. These pamphlets detail preventive measures that are not only advisable to be taken, but which have proved themselves. They are prepared with the utmost care, they will, if carefully read and as carefully followed, do a vast deal to forward public health education, and the methods described "are those approved by our best medical authorities and recommended by the Boards of Health of all major cities."

Which should be guarantee enough of their merit. There is not the slightest doubt in the world that individual cases of these communicable diseases, as well as epidemics, can be prevented. Surely it must be admitted they should be. In any event, the Saginaw County Medical Society is performing valuable service in this departure. It should receive the co-operation of all interested in prevention of disease, and the hope may be expressed that we shall more and more take to preventive medicine, rather than passively waiting to fall ill and then asking to be cured.

As the public becomes educated in these matters prevention will surely come into its own, and that will be a mighty blessed day for the public health.

—Saginaw News Courier, October 17.

LICENSING HOSPITALS

During the past few years states and municipalities have made rapid progress in the enactment of legislation for the promotion of health conservation. Examples are found in the licensing of common carriers for the purpose of safe-guarding the lives of passengers; workmen's compensation acts for the protection of employees; setting standards and licensing all establishments manufacturing, preparing or serving food stuffs; compulsory examinations of food handlers; the promotion of local and state health department activities, etc.

From time to time the suggestion has

been made that states should enact legislation providing for certain minimum standards of hospital service, including the keeping of patients records, surgical and medical practice, nursing technique and training, etc., and that the institutions should be licensed to operate only when these standards are complied with.

Owing to the absence of such control at the present time it is possible for any person to equip and open a building for the reception of patients wherein any type of treatment may be administered, including illegal abortions, operations performed by incompetent surgeons and any other service which may be detrimental to the well being of the patient.

It may be thought that public opinion would force the early closing of such institutions, but it is a fact that the public has, on the whole, a very meagre knowledge of the practice of medicine and little or no ability to choose between the competent and incompetent man for a particular service.

The objection has been advanced that medical service in hospitals, generally, is rendered only by physicians who are graduates of medical schools and licensed by the state to practice, and that this being the case, "why is there a need of placing any further license on the institutions in which such physicians practice." This objection might have had some weight 50 or 100 years ago but is an extremely weak one today, for the reason that the advances made in medical science during the past 75 years have been so rapid and have covered so many phases that it is now a well recognized fact that few, if any physicians, can keep intimately abreast with all these changes and remain proficient in all the various branches of surgery, medicine, obstetrics and the many subdivisions of these major groups.

The public have a right to expect that when sick they will receive the best of medical or surgical care and to a great degree rely upon the hospital to afford them this safeguard if only by the fact that the attending physician is permitted to render the particular service required in that hospital to which the patient is admitted.

Hospitals have this responsibility but in many instances fail in living up to it; and for many reasons, chief of which is the inability of Boards of Trustees to pass upon the qualifications of all practitioners in the various branches of medicine and surgery; the failure of the staff to submit honest and unbiased recommendations to the Boards of Trustees as to the ability of various doctors, even in those instances when they are in possession of facts regarding a lack of abil-

ity. Serious mistakes may therefore be made by the hospital in passing upon the qualifications of any particular man to perform major surgery or its specialized branches; his competency to take full charge of unusual and abnormal obstetrical patients; to treat obscure medical conditions, or even to give high-grade medical service for many of the more common diseases.

Without a definite standard throughout the state hospitals may lay themselves open to criticism in setting up individual standards and to perhaps more severe criticism for unjustly barring individual practitioners or permitting men, not competent, to care for patients in the institutions.

There are in the United States approximately 6,500 hospitals, ranging in capacity from five beds to one thousand beds, while in the state of Michigan, aside from mental and tuberculosis hospitals and other institutions such as Homes for Aged, Homes for Orphans, etc. that maintain a few hospital beds, there are but 12,000 beds in general hospitals caring for more than 35,000 or 9% of the state's population annually.

A careful and ~~impartial~~ consideration of the facts here set forth would seem to indicate that the state would be not only well within its rights but negligent in its duty if it failed to take such measures as would add further safeguards for the conservation of the life and health of these citizens.

The licensing of hospitals is not a new thought in Michigan, where for a number of years all maternity hospitals or maternity departments of general hospitals have been so licensed ~~and placed~~ under the supervision of the State Department of Health.

Assisted by such organizations as the American College of Surgeons, The American Medical Association, The American Hospital Association, The National Nursing Organization and others competent to advise, certain minimum standards governing the practice of medicine in hospitals, the keeping of records, nursing technique, etc., might properly be set up and licenses granted to those institutions complying with these standards. Hospitals failing to comply should be closed or such assistance given by the state, if the institution shows a willingness to comply, as will help them to meet the standards.

Such action would greatly strengthen the efforts of all hospitals that are making an effort to raise the standards of service rendered. It would also give definite assurance to all who are in need of hospital care that their health is being as well safeguarded as in the purchase of food, working in a factory or traveling on the railroad and such

legislation would be strictly in accordance with a sound policy of community health conservation.

S. G. Davidson.

SUPREME COURT UPHOLDS AMERICAN DRUGS

A decision of the highest importance to every physician, pharmacist, drug manufacturer and, in fact, every user of drugs in the United States was rendered by the supreme court of the United States on October 11, 1926, when this highest tribunal of the nation declared that the Chemical Foundation has been acting legally and properly in the purchase of the foreign drug and chemical patents during the war, and licensing American manufacturers to produce these essential substances in this country.

The sale of the German patents to the Chemical Foundation took place during President Wilson's administration and had, without doubt, a distinct influence upon the outcome of the war, because this transfer permitted American concerns to begin at once the production of various drugs and chemicals which had, theretofore, been made only in Germany, and whose importation ceased with our entry into the war.

President Harding, apparently laboring under some misapprehension as to the purposes and functions of the Chemical Foundation directed that suit be brought by the government to set aside the sale of these patents to the foundation.

The case was first tried in the federal district court of Wilmington, Del., and resulted, after weeks of evidence taking, in a finding against the government on all points.

The case was appealed to the circuit court, which upheld the decision of the district court in every particular.

A final appeal carried the question to the supreme court of the United States, where evidence was heard more than a year ago. The long delay in rendering a decision has afforded time for mature consideration. The court has decided unanimously that the sale to the Chemical Foundation was valid and legal and that the foundation has made no improper use of the powers which it thus acquired.

This decision is a momentous one for everyone who has anything to do with drugs and chemicals in any way whatever.

To the physician it means that he will have a steady and regular supply of reliable drugs, of American manufacturers, which can never again be upset or cut off by the vicissitudes of war. The same considera-

tions apply to the pharmacists. Among the vitally necessary drugs affected may be mentioned the arsphenamines, cinchopen, barbitol, the flavines, procaine and a most of others.

To the drug manufacturer, who has invested thousands of dollars in apparatus for the manufacture of drugs and chemicals under the foundation's licenses, it means relief from a certain degree of anxiety (though the outcome of the case could scarcely have been in doubt) and a tremendous inspiration to further investigations looking to the production of more and better drugs and chemicals for America.

To the nation at large, it means that reliable medicines will continue to be sold at reasonable prices; and, more or less indirectly, that the dye industry of America which is now in a flourishing condition, thanks to the Chemical Foundation, will be available for government uses should we become involved in another war.

Nor are medicine and pharmacy the only lines of endeavor affected by this momentous decision. The steel and packing industry and many others will be vastly benefited by the freedom of chemical investigation and activity which is now assured them.

THE POTENCY DATE ON BIOLOGICS

Frequent inquiries are received at the Squibb Laboratories from pharmacists and physicians asking whether biologics, on which the potency date has passed, might not still be used with safety and confidence. This article is written with the idea of answering this same question as it arises in the minds of other representatives of the professions.

The potency date on Biologics is defined in the law, as that "date beyond which the contents (of the package) cannot be expected beyond reasonable doubt to yield their specific results." The Federal Regulations governing the fixing of the potency date on Biological Products have two main provisions. One pertains to those products which have a standard of potency, which can be used at any time to establish definitely the potency and the therapeutic worth of the product. The other provision relates to those products for which there is no standard of potency, or no means of determining quickly by laboratory methods the true therapeutic worth of the product.

In the first class we have the Antitoxins, such as Diphtheria and Tetanus, for which there are international standards of potency. For these products, the government regula-

tions prescribe that for each 12 months' potency-period there shall be added to the contents of the package a definite excess number of units to compensate for the loss in potency on aging, even though not kept under proper conditions. For example, a package of 10,000 units of Diphtheria Antitoxin, having a potency period of two years, must contain, when finished, at least a 30 per cent excess in the number of units, or a total of 13,000 units instead of only 10,000 units as stated on the label.

It is at once apparent, therefore, that a package of Diphtheria Antitoxin may be used any time within the potency period stamped thereon, and that the person to whom it is administered will get at least the number of units stated on the label. Should the contents of the package be used after the potency date has expired, it will be found to be therapeutically effective, and at any time within a year thereafter probably will contain labeled potency.

All will recall that in the diphtheria epidemic at Nome, Alaska, the only Diphtheria Antitoxin that was at first available was outdated but that its use saved many lives.

There are potency standards for other products than Diphtheria and Tetanus Antitoxins, along which may be mentioned Typhoid Vaccine, Diphtheria Toxin for the Schick Test, Anti-Meningococcic Serum, Scarlet Fever Toxin and Scarlet Fever Antitoxin. However, the standards for all of these products, with the exception of the last, are used only for the purpose of insuring that when distributed the product will exert certain specific effects, as for example, that the Anti-Pneumococcic Serum will protect mice against a certain dose of a culture of pneumococci, using a standard serum for comparison; or that Scarlet Fever Toxin for the Dick Test will cause a positive skin test in a person not immune to Scarlet Fever.

Usually but little excess volume is put into the containers of these last-mentioned products, for the reason that the methods of standardization do not permit of exact quantitative measurement.

These products, therefore, will show a gradual decrease in potency on aging but this decrease will be much less when the products are kept properly refrigerated. Most of them may be used after the potency date has expired, if due allowance is made in the dosage for the decrease that occurs from aging. No exact information is available, however, as to how much this loss of potency is for each product.

Consequently, for those products for which no standards of potency have been established, the government has fixed a

definite potency period. These products, which include the various Bacterial Vaccines, except Typhoid, Anti-Streptococcic Serum, Leucocyte Extract, Normal Horse Serum and similar preparations, probably still are therapeutically active after the potency date has been reached, if they are used in excess of the original dosage.

There is no potency standard for Smallpox Vaccine, except that it must produce a good "take." Refrigeration is of the greatest importance to maintain the potency of this product. If kept at temperatures above 50° F., the Vaccine rapidly loses in potency. Smallpox Vaccine should be kept, whenever possible, in a tin box in direct contact with the ice.

Rabies Vaccine, Semple modification, being a skilled virus, is in the same class as other products for which there is no potency standard. Rabies Vaccine, Pasteur, however, has a short potency period and, except for the first seven doses, is only shipped from the laboratory for immediate use.

It will be apparent from this summary of the use of the potency date on Biologics that the government regulations have fixed the potency date for various products to insure "beyond reasonable doubt" the therapeutic worth of those products any time prior to that date. It is also clear that the Antitoxins and most of the other Biological Products may be used after that time in cases of emergency, if proper allowance is made by increasing the dosage.

All will realize the importance of constant attention to stocks of Biologics, always making sure that those with the shortest potency periods are used first.

TREASURER

On October 15th, Dr. D. Emmett Welsh tendered his resignation as treasurer of our society. The resignation was accepted by President Jackson. The president has appointed Dr. John R. Rogers of Grand Rapids to the office of treasurer.

It is but proper that the thanks of the society be tendered to Dr. Welsh who has been faithful in service for a period of 15 years.

I WANT TO KNOW

There are times when you want to know something quickly. Just to help you when you do, you will find the following will answer many of your queries:

The Journal: (Each issue, ad. section).

1. List of State Officers, Councilors, Committees.

2. List of County Societies with names of President and Secretary.

3. Advertisements of firms of national repute selling standard equipment, drugs and specialties.

4. Dates of local, state and national meetings, and important medical events.

Directory of the A. M. A.:

1. Alphabetical list of all physicians.

2. Medical schools.

3. All hospitals.

4. Medical laws of all states.

5. Medical boards of all states.

6. Medical publications.

7. Medical societies and associations.

8. Government services.

9. And about everything else medical about members and institutions.

Your Journal and the Directory of the A. M. A. will answer the majority of your—"I Want to Knows." Use them.

REPORT OF THE HEALTH LECTURES GIVEN IN MICHIGAN UNDER THE AUSPICES OF THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION 1925-26

To the Members of the Joint Committee:

Gentlemen—I wish to submit the following report of our Health Education Program for the year, 1925-26.

Appointment of Dr. Sinai. One of the important steps in our health education work, so far as the administration of this activity is concerned, was the appointment last year by the Regents of Dr. N. Sinai of the department of Hygiene and Public Health of this university to give half-time service to the Extension Division in connection with our state-wide health program. During the year, 1925-1926, Dr. Sinai was called upon to give a large number of health lectures throughout the state, being assigned in general to centers not easily reached by members of our medical staff of speakers. In addition to this lecture work, he was authorized by the director of the Extension Division to undertake the reorganization of our health education work in Detroit.

Health lectures in Detroit. Prior to the past year it was our practice to assign members of the medical profession of Detroit to speak to student assemblies and other organizations interested in health work. In some cases as many as 3,000 students met in assembly to listen to these health talks. It soon became apparent, however, that it was impracticable to handle satisfactorily such large student audiences. Dr. Sinai was therefore requested to recognize the work in such a way as to make arrangements for

health lectures before smaller groups. In this reorganization work he received invaluable assistance from Dr. J. H. Dempster and other members of the Wayne County Medical Society Committee on Public Education, and also from the Principals of the Detroit high schools. The plan which Dr. Sinai and the Detroit committee worked out and ultimately put into practice involves the following three important features:

(a) First, a series of five groups of subjects was prepared to be given in order to the schools selected. These five groups included lectures on the following subjects: Health Habits, The Heart, Diet, Digestion, Bacteria and Accidents and First Aid.

(b) Five or six speakers were selected for each group of lectures. An outline of the entire series of lectures, together with the dates, hours, and places chosen for each lecture was placed in the hands of the speakers. In addition to this general announcement, reminder cards were sent from the Extension office to the various speakers concerned a week before the date set for the address.

(c) The approval and co-operation of the Principals and Health Directors of the various schools concerned was obtained. Most valuable assistance in the carrying out of the details of the program was given by the principals and teachers.

Health lectures, as above outlined were assigned to the following schools in Detroit and vicinity:

Cass Technical high school.
High School of Commerce.
Eastern high school.
Northeastern high school.
Northwestern high school.
Northern high school.
Redford high school.
Southeastern high school.
Southwestern high school.
Strathmoor high school.
Western high school.
Detroit University school.
Hamtramck high school.
Highland Park high school.

The program as arranged and carried out in Detroit and vicinity included the following speakers:

Health Habits

Guy L. Kiefer, M. D.
William Donald, M. D.
Chester A. Doty, M. D.
W. H. Gordon, M. D.
Don W. Gudakunst, M. D.
Kegham Chutjian, M. D.

Diet

Henry R. Carstens, M. D.
B. C. Lockwood, M. D.
H. B. Garner, M. D.
W. J. Stapleton, M. D.
Lynn F. Webber, M. D.

Bacteria

H. L. Clark, M. D.
Roy Pryor, M. D.
Fred M. Meader, M. D.
Carl Buck, M. D.
Charles T. Root, M. D.
R. L. Novy, M. D.

The Heart

Stuart Wilson, M. D.
Walter J. Wilson, M. D.
E. D. Spalding, M. D.
C. E. Dutches, M. D.
Willard Mayer, M. D.
Douglas Donald, M. D.

Digestion

R. S. Stone, M. D.
J. H. Dempster, M. D.
Winard Pyle, M. D.
John L. Chester, M. D.
George J. Baker, M. D.

Accidents and First Aid

Charles F. Kuhn, M. D.
B. F. Larsson, M. D.
J. Walter Vaughan, M. D.
Don W. Gudakunst, M. D.
A. R. Hackett, M. D.

Records of all lectures given were kept on file in the Extension office, reports of each lecture being received both from the doctors giving the lectures and the principals of the schools to which the assignments were made. With very few exceptions, these reports were favorable. The program as a whole was very satisfactory, so much so indeed, that every school in which the lectures were given made application for a continuation of the work this year.

Number of health lectures given in
Detroit and Wayne County schools..137
Average attendance.....215

Health lectures in the Grand Rapids and Flint schools. The Detroit experiment proved to be so successful that Dr. Sinai was instructed to organize similar health lecture series in Grand Rapids and Flint. The time available for this work was short, but it was thought advisable to attempt the initiation of the program. The school superintendents and principals of both cities approved of the plan and lent active co-operation in the organization of the work.

In Grand Rapids lectures were given in the following schools:

Central high school.
South high school.
Union high school.
Vocational school.
Creston Junior high school.
Ottawa Hills high school.
Harrison Park Intermediate school.
Burton Intermediate school.
Girls' Catholic school.
Christian high school.

The following speakers and subjects were selected for the Grand Rapids series:

Health and the Microbe

J. S. Brotherhood, M. D.

F. C. Kinsey, M. D.

Balanced Eating

B. R. Corbus, M. D.

T. D. Gordon, M. D.

The Heart

William R. Vis, M. D.

A. J. Baker, M. D.

Accidents and First Aid

R. H. Denham, M. D.

L. E. Sevey, M. D.

Health Habits

A. M. Campbell, M. D.

R. R. Smith, M. D.

Number of health lectures given in

Grand Rapids schools..... 48

Average attendance..... 500

In Flint health lectures were given in the Central high school, South Junior high school, Whittier Junior high school, and the Emerson Intermediate school by the following speakers:

Health Habits

E. B. Pierce, M. D.

Medicine as a Vocation

W. H. Marshall, M. D.

Accidents and First Aid

A. C. Blakeley, M. D.

Diet

F. B. Miner, M. D.

David Jickling, M. D.

Bacteria and Disease

L. R. Himmelberger, M. D.

Number of health lectures given in

Flint schools..... 24

Average attendance..... 325

Extension of the Series Plan of Health Lectures to other centers of the state. Our health lecture programs conducted in Detroit, Grand Rapids, and Flint worked out so well last year, as considered from the viewpoints of both the members of our speaking staff and the principals of the schools concerned, that we shall undertake this year to extend this plan not only to a number of other cities in Michigan, but also to several of the counties. In a later report I shall outline briefly the proposed plan, especially as affecting the work next year in certain selected counties.

Health Lecture Program throughout the state. During the past year we continued our practice of assigning speakers for health lecture programs in connection with Parent-Teacher Associations, Women's Clubs, Luncheon Clubs, Granges, and other community organizations when called upon for this type of service. According to the reports received by the Extension office these assignments have, in general, proved satisfactory. Occasionally local committees have found fault with the speakers assigned. Such complaints, however, were on the whole very rare. Local committees are, in general, very charitable.

In a few instances speakers reported unsatisfactory program arrangements on the part of local committees. The main complaints this category had to do with the admitting of small children to the lectures. In assigning health lectures every effort is made by the Extension office to instruct local committees as to satisfactory program methods of organization. In some cases the number of people attending health lectures, especially when such lectures were assigned in small and outlying communities, was very small. In this connection, three things should be kept in mind: (a) The first is that in many centers to which health lectures are assigned the audience is bound to be small because of the limited number of people in the community in question. (b) Second, if all the people of the state were enthusiastic about health and health lectures, no such program as the Joint Committee is attempting to carry out would be necessary. We have undertaken an educational program and it is important to bear in mind that the process of education is under the most favorable circumstances a slow one. (c) And, finally, it should not be forgotten that while in some cases the audiences which have greeted our speakers have been relatively small, the average attendance upon these lectures throughout the entire state was 180. This means that while in a few cases we have had small audiences, in the great majority of cases the attendance was remarkably high.

During 1925-26 one of or more health lectures were assigned to the following centers throughout the state:

Adrian	Gagetown	Montrose
Alpena	Gaines	Mount Clemens
Ann Arbor	Galesburg	Mount Morris
Armada	Galien	Muskegon
Bay City	Gladwin	Niles
Berrien Springs	Glennie	North Adams
Big Rapids	Goodrich	Okemos
Britton	Grand Blanc	Onaway
Calumet	Grand Haven	Orion
Cass City	Grand Rapids	Otisville
Cedar Springs	Grass Lake	Otsego
Ceresco	Grosse Pointe	Oxford
Clinton	Hamtramck	Pentwater
Clio	Hancock	Plainwell
Coldwater	Harrisville	Pontiac
Comstock	Hartford	Redford
Coopersville	Hesperia	Reed City
Coral	Highland Park	Rochester
Croswell	Homer	Rogers City
Davison	Hudson	Romeo
Dearborn	Ida	St. Clair
Deckerville	Ionia	Saline
Detroit	Jackson	Sault Ste. Marie
Dexter	Kalamazoo	South Lyon
East Tawas	Kingsford	South Rockwood
Eaton Rapids	Kingston	Spring Lake
Eau Claire	Lake Odessa	Standish
Ecorse	Lakeview	Sturgis
Elsie	Lansing	Swartz Creek
Fairgrove	Laurium	Tecumseh
Farmington	Leslie	Tuscola
Fennville	Lincoln	Union City
Fenton	Linden	Unionville
Flat Rock	Maple Rapids	Vernon
Flint	Midland	Waldron
Flushing	Millersburg	Washington
		Ypsilanti

Health lectures were given in the above

centers by the following members of our speaking staff:

I. M. Altshuler, M. D.	Guy L. Kiefer, M. D.
A. C. Blakeley, M. D.	Marie Kiernan
W. I. Bailey, D. D. S.	F. C. Kinsey, M. D.
A. J. Baker, M. D.	Charles F. Kuhn, M. D.
C. H. Baker, M. D.	B. H. Larsson, M. D.
Geo. J. Baker, M. D.	A. Leenhouts, M. D.
H. A. Barbour, M. D.	George LeFevre, M. D.
Barbara Bartlett, B. S.	Simon Levin, M. D.
H. F. Becker, M. D.	H. B. Lewis, Ph. D.
G. M. Belhumeur, M. D.	B. C. Lockwood, M. D.
C. E. Boys, M. D.	R. E. Loucks, M. D.
S. E. Braendle, D. D. S.	Don C. Lyons, D. D. S.
G. J. Broodman, D. D. S.	R. W. McGeoch, M. D.
J. S. Brotherhood, M. D.	R. W. McLain, M. D.
Carl Buck, M. D.	J. G. R. Manwaring, M. D.
Margaret Bulkley, R. N.	F. B. Marshall, M. D.
Max Burnell, M. D.	W. H. Marshall, M. D.
Hugh Cabot, M. D.	B. H. Masselink, M. D.
C. D. Camp, M. D.	Willard Mayer, M. D.
A. M. Campbell, M. D.	F. M. Meader, M. D.
H. R. Carstens, M. D.	F. B. Miner, M. D.
J. L. Chester, M. D.	E. D. Mitchell, A. M.
Kegham Chutjian, M. D.	A. R. Moon, M. D.
H. L. Clark, M. D.	Helen D. Moore, R. N.
Maria B. Coolidge, M. D.	Elba L. Morse, R. N.
B. R. Corbus, M. D.	K. L. Novy, M. D.
F. P. Currier, M. D.	E. B. Pierce, M. D.
J. H. Dempster, M. D.	F. A. Poole, M. D.
R. H. Denham, M. D.	Roy Pryor, M. D.
Douglas Donald, M. D.	C. D. Pullen, M. D.
Wm. Donald, M. D.	Winand Pyle, M. D.
Chester A. Doty, M. D.	H. E. Randall, M. D.
C. E. Dutchess, M. D.	H. A. Reye, M. D.
Lucy M. Eames, M. D.	H. M. Rich, M. D.
C. R. Elwood, M. D.	Otto L. Ricker, M. D.
W. F. English, M. D.	Charles T. Root, M. D.
Ruth Figge, B. S.	H. C. Saltzstein, M. D.
W. L. Finton, M. D.	S. E. Sanderson, M. D.
A. F. Fischer, M. D.	L. E. Sevey, M. D.
Raymond Forsythe	N. Sinai, D. P. H.
W. E. Forsythe, M. D.	C. C. Slemons, M. D.
H. B. Garner, M. D.	R. R. Smith, M. D.
Nathaniel Gates, M. D.	E. D. Spalding, M. D.
T. D. Gordon, M. D.	Wm. J. Stapleton, Jr. M. D.
W. H. Gordon, M. D.	R. S. Stone, M. D.
D. W. Gudakunst, M. D.	John Sundwall, M. D.
A. R. Hackett, M. D.	E. R. Swift, M. D.
Dorothy G. Hard, D. D. S.	A. C. Thompson, D. D. S.
Robt. Henderson, M. D.	L. C. Towne, M. D.
W. D. Henderson, Ph. D.	Pearl Turner
L. R. Himelberger, M. D.	J. Walter Vaughan, M. D.
Melita Hutzal	Wm. R. Vis, M. D.
J. B. Jackson, M. D.	F. C. Warnshuis, M. D.
A. L. Jacoby, M. D.	Lynn F. Webber, M. D.
A. F. Jennings, M. D.	Theo. J. Werle
David Jekling, M. D.	C. M. Williams, M. D.
W. J. Kay, M. D.	Stuart Wilson, M. D.
C. S. Kennedy, M. D.	Walter Wilson, M. D.

Total number of health lectures given in the state.....	480
Average attendance.....	180
Total attendance.....	84,000
Increase in number assigned over last year.....	45%

PUBLICITY PROGRAM OF THE JOINT COMMITTEE

At the meeting of the Joint Committee held in Ann Arbor on April 26, 1926, provision was made for the organization of a Bureau of Publicity, this work to be under the direction of a Publicity Committee and to be carried on through the Extension Division. The members of the Publicity Committee are Drs. Jackson, Biddle, Sundwall and Mr. Werle and Mr. Henderson. A start was made in this publicity work, articles approved by the committee being forwarded to the Extension Division through Mr. Werle's office at Lansing. A complete list of addressograph plates was prepared by the Extension Division, this list of addresses

covering both the daily and weekly papers of the state. About the first of June articles began to go out to the press. At the present time we have no means of reporting as to the number of articles which were actually used by the papers of the state. Provision has been made, however, for securing through the agency of a clipping bureau some information on this point.

At the April meeting it was voted to establish a Publicity Fund, this fund to be deposited with the treasurer of the university under our trust fund provision. The fund is entered on the university books as the Joint Committee Publicity Trust Fund. The following is a statement of receipts and disbursements to date:

Receipts

Michigan State Medical Society.....	\$100
State Dental Society.....	100
University of Michigan.....	100
	<hr/> \$300

Disbursements

Mimeographing, stationery and postage.....	\$146.46
	<hr/> \$146.46
Balance on hand.....	\$153.54

Respectfully submitted,
W. D. HENDERSON,
Secretary.

CALL OFF YOUR DOGS

By Jack Pines

According to the custom of the politician I should begin by complimenting my audience, especially the beautiful ladies. But I am not likely to kiss any babies today. As I looked over the audience at Greenbush the other day I labelled it the finest body of real manhood I had ever addressed.

Our excellent associations have done wonderful work. They have improved not only the standard of medical work, but they have improved the personnel of their membership. Among one of the many improvements of the past 10 years is the elimination of the "Lost Manhood Bunch." Some have died, some have reformed and been taken into the associations, while the others have gone into politics and the service of the so-called state board of health.

Now it is up to you to get in touch with our state officials and drive the scalawags out of office. I cannot tell you how. It can be done through your own party if you will get to work right now before the coming election. Begin at home. See that you have a State Board that will work with the physician instead of against him. Do you know that in our large cities men are draw-

ing public money for exploiting the cults? The teachers of hygiene, of physical culture, of athletics and recreation are many of them teaching the propaganda of the various anti-medical cliques. They are conducting boys' schools right now right here in Michigan, and to take the curse off they try to get some flabby regular practitioner to drop in occasionally and hold the bag. At some of these camps even now c.s. readings are being given to the boy boarders who are paying \$50 a week for our glorious fresh air. And once in awhile they can find a soft-boiled medical man who is flattered to have his name upon their advertising matter. We write these things to prominent physicians in the large cities, but they are too busy with golf and clubs to give attention. Yet they say they do not see how these frauds get their start.

I hope that this is not my swan song, but I am old and there is much that our journals do not say that is of vital importance to the members of this society.

Pardon me for being personal, gentlemen, but in the beginning I wish to mention my competitor, my colleague, Dr. MacKinnon, my comrade. I knew him when he had seven competitors in a little burg not on the map. They are all gone now but me, and I am said to be ageing. We have gotten along fairly well. To be sure he has made mistakes, but I have always gone to him and explained that he was wrong, and then we could walk upon the same side of the street. We got along better when we found out that some of our patrons were liars who hoped to reduce us to a lower status and reduced fees by keeping us chewing ears.

Still he gets in a mean lick once in awhile, as for instance: When I was away last summer to the western coast my mail got scattered. I got three sets of journals, one to Lewiston, one to San Francisco and for some reason one to Alpena. In conversation with the doctor I remarked that my hobby was reading books and journals. This was true. I also said I read all the journals. This was true. I have little else to do. He gets all the practice, and I was honest in my statement. But, he rolled up his eyes, wrinkled his brow, and every hair upon his head stood up as he fired this one: "Yes, I see you do, look there," and he pointed directly at a stack of unwrapped journals. Of course I can never forgive that. It will remain an impassible chasm.

Still we help each other a little. Members of this society should help each other more than they do, and they can often do so.

For instance, if you want to buy a cow or

a piece of good land I can tell you right where to go, and if you want a good looking office girl, Dr. MacKinnon can take you right to the beauty show. All of which calls to mind the days when I was teaching school and boarding around.

One day it fell to the teacher to take up his temporary abode with a family that sent three young ladies to his school. Inasmuch as a school teacher in those days was supposed to be quite a prospect because he usually wore a white collar, paper, 30 cents a box, in a box or reversible 40 cents a box, it was but natural that parents with a surplus of daughters and a scarcity of calico should try to make a favorable impression.

The old man was digging a well. Although he was 12 feet below the surface of the earth he was carrying on a conversation with a group gathered around the top of the pit. As the teacher approached, the old man directed the conversation to him, and began by inquiring how his daughters got along in school and as to their conduct. After being assured that their conduct was perfect the old man remarked: "Well it ought to be if there is any thing in good breeding, me and my wife have been married nigh onto 30 years and we never had a cross word yet, Have we Miranda?" "Shut your head, you d---d old fool."

Truly, gentlemen, it adds to the pleasures of life to know that one has at hand a friend to whom he can go with any trouble and get needed help and sympathy. We feel that way, and the man who tries to wedge in between us gets the hammer.

"HYGEIA" Who said what you wanted for your patients? What do they know about your clientele?

It cost me around \$4,000 and four years' time to learn a little about practical medicine; it cost some of you more than that. And for what?

To save life, to cure disease, to relieve pain.

Then every year comes a bill of around \$150 for books, journals and other means of improving our medical education. Quite an investment, quite a tax, we do not need these books, these journals, these clinics; we get them for the benefit of our patients. Who else is doing as much for mankind? Not the salaried summer go-round. No, not by any means.

Now, gentlemen, we come to exhibit "A." The day of hornblowing is past. There has been too much of that, and I am ashamed to say it has often been done by men whom we have advanced to high places. Men in our own profession have taken advantage

of our courtesy to publicly belittle the American practitioner.

Darn a tinhorn anyway. The time has come to use a hammer. This is really a constructive implement, but it can be used if necessary to rip out a piece of bad work before it ruins a grand structure. From now on use the hammer, gentlemen.

I will now turn over this exhibit to the chairman of this society. Long may he use it as the constructive tool of this association, and may it also be used by all of you whenever necessary as the protective weapon of Michigan medicine.

The time has come for every registered physician of Michigan to say to the life-destroying gang that is hampering the humanitarian work of the American physician "CALL OFF YOUR DOGS."

We are saving life, curing disease, relieving pain. "Call off your dogs." Sick folks want the doctor.

Much is being written these days about educating the public in medicine. Not a word about teaching them how to vote. Your speaker is heartily in favor of teaching the conservation of health. To his personal knowledge the medical profession of Michigan has been teaching that for half a century, but they have neglected to claim credit for their work.

Much that is being exploited in the propaganda of politicians was announced by members of this society before some of our officials were born. We have been allowing these politicians to profit by our work, our unpaid discoveries. The public has been led to believe that all real progress in sanitary matters has been made by people outside of our ranks. Get your hammer and wade into them.

Iodine was used in the treatment of goiter centuries ago, and its merits were made known to the world by the physicians of the past. Yet, within the past 10 years it has gone out that certain politicians have made a great discovery. And even do they go so far as to say that "physicians are now being instructed how to use it." And we allowed this because we had no hammer. Nevermore.

Going back about four months I found among the few unfortunates who were obliged to call at my office during the absence of my worthy competitor a number who manifested a group of symptoms not like those of the locality or the season. Eventually it occurred to me that these were the symptoms of Iodism. A little helpful medicine and advice to quit Iodine brought about a cure in nearly every case. Hammer.

The effort to make a physician out of

every clinging vine who calls up over the phone asking how to use nitro-glycerine, aconite or insulin is worse than time wasted. Even now the physician at the bedside has to decide whether he is examining a sick human or taking the inventory of a drug store. In time a properly educated public may be taught that much illness is caused by the indiscriminate use of toxins purchased from stores which flaunt the sign: "Try the drug store first." And this suggests that our worthy health officers have better work before them than hampering physicians.

Much of the so-called health work being done by our schools may be useful, but some of the attempts to teach therapeutics are worse than ridiculous. Country physicians are frequently called upon to furnish a nickle or a dime's worth of drugs that are so poisonous that even he himself uses rarely and then with extreme caution. Not long ago a fine healthy boy was sent home from school because he was two inches too tall and weighed 12 pounds too much. His father and each grandfather weighed around 200.

Probably every physician can quote many similar instances, but these will suffice to show that the advice of a certain popular journal that physicians should lend their medical literature to their neighbors is not to be followed. Medical journals left around for the perusal of our patients is to say the least, bad medicine. Hammer.

"Help educate the public?" Every time the general practitioner enters the sickroom he tells the patient or his attendant all that pertains to the case. Sure thing. Who else? In fact sometimes we talk too much. Sometimes I think our bills should read: "For instructing the family and the neighbors." Perhaps some of you have noticed how the cult people like to gather in the sickroom to pick up items they can use in some of their sidelines.

It might be wise for some of these uplifters to tell their audiences how to treat a physician and how to remunerate him for his labor.

Periostitis, treated by the cults six weeks, the poor little sufferer moaning her life away, my friend over there, called in to be on hand for the death certificate, works hard to save life and limb, and is largely successful, but in spite of the fact that the results of his work were almost miraculous his bill is still unpaid, yet people have recently raised a purse of \$70 and sent it to the distant fakir that never even saw the child. Hammer.

Why are we allowing people who know so little about our business, never mixed

with common people, to advise the general practitioner how to manage his practice? Hammer.

It ought to be hammered into the heads of some of these spouters of prolixity that if the rank and file of the medical profession is to back the publication of medical matters to or for the public then should the rank and file know what is written and who writes it. Hammer.

When they come at you with that public medicine stuff do your duty as an American citizen and tell them the dangers of paternalistic graft. Counter irritants are for just such cases. And shoot it into the politicians. Tell them to call off their dogs.

And say: One gets sick of this diet stuff. The magazines are full of it. Your patients are sick of it.

The aim of this association is the advancement of medicine for the benefit of humanity. The dealer is entitled to a few cards in any game.

Brace up, doctor, use your hammer. Or, tie a rag around your leg and go limping down the street and every dog in town will chase you.

And, they have been rubbing the "mystery" stuff into us. The physician's life is a battle of mystery. The mysterious problems of life and death are not yet solved, and it is the physician who must grapple with them. Every case has its mystery, for instance, that girl who has been married only six weeks and has symptoms not far remote.

If we do not stand upon the street and gossip about the troubles of our patients they say: "Doctors try so hard to be mysterious." Get your hammer.

OUR worthy health officer says that our laws protect the physician. Who ever heard of such a law? As a rule your representatives hold up both hands and say "Tie here."

Let a physician raise his prices and watch the reaction of the lay press, yet a state official can raise his own salary and collect pay for running a school for training physicians—in politics.

When a lay paper says that the public has a right to expect much from physicians I want the writer to give his reasons, also to tell what the public gets from him. Hammer.

We have a glorious national organization. As with our great state society it is manned by competent and efficient men.

But, it may become top-heavy. Too many bureaus, commissions, etc. Perhaps its greatest danger lies in the fact that you, the active workers in the field, do not take sufficient interest in what your officers are do-

ing. You should know what is to be published as well as what has been published.

Where were the physicians when it was time to enforce the prohibition amendment?

The public was terrified lest the medical profession should have any thing to do with it.

Could it have been handled more clumsily? Where was the great American Association at that time? Were its officers looking after your interests? Good Lord, you don't need to be a physician to make money out of whisky.

Too much space is often given to men who are not in touch with the rank and file. Men who have inherited their practices and dropped into soft places are not likely to be competent to dictate the policies of our journals or our practice.

Nor should these men be allowed to burden the pages of all our journals with the same article. It goes beyond assumption for a writer to insist that his article be printed repeatedly. You pay the expense of publication. Why should you turn over the pages of your journals to some one who knows about your business and very little about his subject. When a writer says that 20,000 of the physicians of the great state of New York do not own nor know how to use a stethoscope it is time for someone to come forward with a hammer.

One of our popular magazines devotes a page to "More dishes without meat"; perhaps some readers as well as most of my audience would prefer "more meat and less dishes."

And here is another urgent call for the hammer. This infant mortality stuff has been broadcasted for the past five years. We have reason to believe that no nation upon the earth takes better care of its mothers and babies than does the United States of America. I have been told by foreign peasants that in the old country very little attention is paid to the so-called mishaps. We see the broken-down victims of neglect as they come to our shores and we have ample chance to make comparison.

Statistics are not always fair. We know a physician who reported three stillbirths in 48 hours. He had never seen one of the women before. One was a foreigner only six weeks in the country, one was but a few days from another state and one was a summer resorter who had come north hoping that the rough journey and other hardships would do just what they did.

What would you think of a woman who boasts of being the mother of 18 children mostly morons and who also boasts that she

carries "papers" from the state board of health entitling her to practice midwifery?

Now, gentlemen, I have been around somewhat. I have not seen a case of puerperal septicemia in a dozen years. I have not known of a case in the practice of my friend and colleague.

In my whole life I have never delivered but two dead babies that were alive when I got there. I think that the average rural practitioner can safely compare cases with some of those who would like to sell their services to the dear motherhood of America. It is also a well known fact that some of the poorest obstetricians are making the most ado about affairs as they do not exist outside their own practice.

Probably you all remember that article about "synergistic analgesia" that appeared in one of our leading journals and was copied in all of them and in the lay press as well. Not one physician in this room could hold his practice if he practiced such a diabolical way of managing a case. It was absurd and cruel. Few American women would ever subject themselves the second time to such treatment. The writer tells of taking 58 hours to dilate the os, and writes as though he thought it quite a feat. He tells of the harmful and dangerous things he and his helpers did as though they were a part of necessary technique. Evidently he did not know how such cases were usually conducted. All the analgesia he got was from the opiates, and they were not properly administered. That stuff should have been kept out of the medical journals. No time was saved, the woman's sufferings were greatly augmented, and there is not a physician in this room that could not terminate any of the cited cases with the greatest success in half the time and save the patient pain and mortification. Hunt up that article and let your wife read it and ask her how she would like such a Tom Sawyer method.

You should use your hammer whenever an attempt is made to make it appear that the natural course of water should be up hill, or to show you off to a disadvantage to the reading public.

Head this off "doctors needed in the country" stuff. When the city papers come out with an urge to the young physician to settle in the country tell them that only a year or two ago this section of the state had three physicians in their county houses.

No one is doing anything for your old people. Even the doctors are fighting the old age pension. Better let them have a little money for the local physician to make easy the last days of our grand parents

rather than so many dollars to old maids for exploiting the "Save the Babies" stuff.

Tell them they better take a little more interest in our elderly folks who are being shamefully neglected throughout the entire land.

Once in awhile one of you will grow old.

Gentlemen, here is a specimen of horn blowing by a noted Boston physician. He says, in our journals too, that 68 per cent of the cases sent to him are incorrectly diagnosed. Get your hammer. No case of mine will ever go to him. It reminds me of the case that I sent to a throat specialist for an up-to-date laryngoscopic diagnosis. He kept her several weeks and sent her home an abdominal operation. It was in the days when the password was "Lane's Kinks" and almost every specialist had a kink. About seven months later the patient died of tuberculosis, pulmonary.

Use the hammer upon that molly coddle who announces that medicine does not cure disease.

Cut out that inhuman monster who says that it is not professional to relieve pain. It is a prominent feature of general practice to stop human suffering. There are a hundred things besides morphine that will do it.

Gentlemen, when you are back in our country come and see me. You will have no difficulty finding the road for you will find it strewn with discarded insulin syringes, and as you pass the schoolhouses you will observe the children playing marbles with stacks of aspirin tablets for stakes.

You are members of a great association and you should make yourselves as important to that body as it is to you. Use your hammer and assert your membership. Perhaps the rank and file will yet have a board of censors to decide in advance whether the publication of an article will be in the interests of the field worker.

There are too many bright-light fellows pretending to be working for the uplift of the profession. Speaking of mysteries, it is a mystery how they manage to get their effusions into print. Editors must be overworked or such stuff would never get by.

These swivel chair practitioners have too much to say about their superiority. Use the hammer.

The journals of the cults are very careful not to publish anything that discredits their supporters.

I have great respect for the majority of our medical writers and for the editors of most of our journals. The work of our journals is most wonderful. Medical progress as portrayed by our association journals has been beyond our greatest expecta-

tions. Then why neutralize it in order to give some lounge lizard a chance to get his name before the lay public? The man who writes to exploit himself at the expense of abler men should not be delegated to entertain the public. Anything that prejudices the public against the American Physician should not be granted space for that is the kind of article that the lay papers will pounce upon. Speaking of publicity stuff—thousands of good practitioners would like to know who is to do the writing and what he is going to write.

Gentlemen, someone has to say these things, and it will hurt an old man less to say them than it will hurt a younger man who has yet to make his way. Gentlemen, be careful how you exhibit this publicity stuff. The best thing for the American physician to say at the present time is: "Call off your dogs."

Then and not until then will there be a resumption of friendly relations between physician and patient.

What then? Let every member of our societies get in touch with the officers and editors thereof. Do not let them forget that there is a rank and file.

The best word spoken for American medicine has recently been written by Ray Lyman Wilbur of Leland Stanford University. He tells us in a direct way what can be done and what should be done. The most practical article upon that subject.

Did you read the article by Bernard Fantus upon the technic of medication? Thorough, practical, very much needed and worth 10 years subscription to any practitioner. A good book to buy.

And that article by Dr. Deland upon Radium and Cancer. I venture that it is the best and most hopeful article ever written upon the use of Radium. Many a \$10 book has been palmed off on the anxious physician that does not tell as much.

Our tables are covered with reading matter, and some of it is, oh, so prolix. The color of the dog and his weight in ounces. We cannot today read even the fraction of it. Then let us ask our writers to condense and our editors to avoid repetition.

We are tired of the fellow who gets himself at the top of the stairs and shouts down to us that we must read his indigestible stuff before we can come up.

The good old pastor had reached "twelfthly" and had informed his audience that they must not expect him "to dilate" when his wide awake daughter called out to him from a back pew: "You'll die late if you die to-night Dad."

Think of all the stuff that has been writ-

ten about Iodine, and notice how easily one of our best writers knocked it all into a cocked hat. Shades of Crile and Crotti! The State Board of Health teaching country schoolma'ams how to treat goiter.

Oh, yes. Summer resorting and weighing babies. The state paying the bills. In the winter scores of shanties crowded with suffering humanity and not a nurse within 40 miles. Our clinic. Cabbage and lettuce for nursing infants. Squirting green.

It does not flatter me to have one of these salaried nurses come to my office and ask me about how I treat certain cases. Too much has already been pumped out of the lonesome doctor for the benefit of salaried welfare folks.

Our medicine men should know about what is being done at Lansing. Hammer.

Here comes a little girl for 5 cents worth of sugar of lead. The teachers' examination papers tell how to use it and some of the most deadly poisons are thus advertised. If the local physician starts in to furnish a few cents worth of chemicals every time he is asked to do so he will soon find himself attending funerals if not facing a trial.

I see where a fellow down east is trying to find out if our fees cannot be lowered. That fellow gets \$12,000 a year. Many a better man is not making the thousand. The second same man says the average laborer gets \$2,600 per year. Yet he thinks the average city physician should not charge more than a dollar a visit. And some of our journals will publish the stuff and turn it over to the lay papers. Hammer.

Your blank for examinations is bum. Like a tapeworm, no head, no tail. My class balks squarely at religion and politics. Hammer.

Say, get after some of those medical uplifters with that hammer. Tell them to send that poor family some clean sheets and pillows, some soap, a wash bowl, Lord, let's keep them busy. Keep ahead of them. By the time they have washed up a case or two and furnished a few dollars worth of necessities they will lose some of their hankering to be doctors.

The general practitioner gone out of practice? No. Specialists, Yes, after 10 years of general practice.

Use that hammer on the specialist who "specializes in everything." That is too silly.

I sent a girl to an eye man once for a pair of glasses. He sent back that he had found out that she was a masturbator. He also specialized in that. However, he stung her for a \$17 pair of glasses.

Gentlemen of the Alpena Medical Society,

much is being published, much that is speculative, much that is false, much that illy fits our environments, but we must not forget that the work of a physician is saving life, curing disease, relieving distress, and we must do these things our own way for human suffering will not wait for prolonged laboratory investigations.

The rural physician is often perplexed as to whom to send a case. He sends a man to have an X-Ray examination and if he ever hears of the case at all he finds that the victim has suffered amputation of his right leg. Often the trouble for which the physician wants help is ignored and the patient led off on some tangent with the opinion that the first physician was an ignoramus and the second a fakir. Not long ago I sent a case away for nasal work. She had never breathed through either nostril in her life. She returned with a bottle of Lugol and a diet list a yard long. Doctor, go light on that diet stuff. We have to furnish some of that bill of fare and neither our markets nor our purses are adequate to some of the demands you make upon us. It is a mistake to prescribe drop-by-drop stuff. Have it diluted to fit the case before the patient gets it. Not too much publicity if you please. Every day you are giving the drugstore a chance to usurp the place of the physician.

We send these cases to you, we can do some of these things as well as they are often done, but they think that if we are such fools as to live in their communities we ought to do a \$200 operation for 30 cents. Well, you have the advantage there. We have explained the need to them and you get the money and we get the groans.

Not long ago I was in a house where a bottle of nitric acid, undiluted, had been left to be taken three drops in water. It had been tipped over and scarred face is the result. Better to have been diluted.

Perhaps our new board of health will say something about patent medicine and drug store practice. Your fault if they don't.

Let us get into the harness. Let us take an active interest in the work of our associations. Let us assert our right to know what is being published.

Our association is all that we have. I am proud of it and of our officers. It is the advance guard of progress and is of benefit to every member.

Let not those outside the profession sidetrack us from our duty.

To save life, to cure disease and to relieve distress—And to vote.

And, gentlemen, don't forget the hammer. Make them call off their dogs.

R. H. Wood, M. D.

Editorial Comments

Mackinac Island, June 1927! Already we are outlining the program and events. It will be an annual meeting you will talk about for years. Keep your eye open for announcements each month.

If there are violators of our medical laws in your locality, we would like you to advise us as to who they are and what they are doing. Specific information is desired and as much evidence as you can supply. Your name will not be utilized.

Action of our House of Delegates: That every County Society subscribe for from five to five hundred copies of *Hygeia* to be placed in libraries, factories, schools and reading rooms. Has your County Society complied with this direction? The subject should come up at your next county meeting.

Again an opportunity to vote. Exercise your right. Get acquainted with your county candidates and tell them you expect them to represent the interests of all in matters of health. Fair play and sound principles is all we want. Vote—but know the candidates first.

The American Red Cross Disaster Relief Plan, adopted by the A. M. A. and our House of Delegates provides an emergency unit in every county. Read the editorial and at your next county meeting perfect your local organization. Just another instance of preparedness that will be effective when the emergency arises.

The Michigan Tuberculosis Association has distributed to all doctors a manual on Diagnostic Standards. This is an excellent manual, meriting study and observance by every doctor. Our thanks are due to the "M. T. A." That organization is accomplishing worth while things and is an outstanding asset to the state in the anti-tuberculosis campaign.

If you liked this and the October issue of *The Journal*, write and tell us. We purposely cut down the summer issues but now with longer evenings you will have time to read. If you don't like these issues tell us because we want to meet your desires. In reading do not omit our advertising pages. Patronize these firms who use your *Journal* and pay good money for the space.

Three-Day Clinical Course at Ann Arbor, November 11, 12 and 13. Three days of clinical demonstrations—from 9 a. m. to 5 p. m. Every hour filled with practical information that you take home with you and apply in your daily work. Two evenings of lectures by men of national fame. Can you afford to pass it up? We'll say you can't! So send in your enrollment. Your State Society is paying your tuition. Its a membership benefit.

Tonic and Sedatives answers the inquiry: "If a physician cannot blow his own horn, etc., who can?" by advising, "let his wife do it." That seems to be quite a common practice nowadays if one but turn to the society columns of local papers. If our "guides on etiquette" or "social customs" be consulted we learn that the form of "Mrs. Dr. Jones" is vulgar and a breach of demeanor or social caste. Evidently there is an increase in "vulgarity" and a considerable number of breaches, but the "horn tooting" goes on merrily.

Lest you forget—we remind you that we are not idle for right now we are forging ahead on the following projects: District Post Graduate Conferences, the three-day University Post Graduate Meet, legislative plans and contacts, Conference with State Nurses Association on Nursing Education, Committee on Policies at the University hospital, Red Cross Disaster Relief Plan, National Legislation, Activities of our medical and health laws, minimum program, survey of county mortality rates and one or two other projects. In addition we still keep contact with County Societies, get out your Journal, hold a monthly Executive Committee meeting, answer daily inquiries watch the funds, and all the other regular routine. We mention this not to record that we are busy, but simply to let you know your State Society is on the job devoting its all to further your interests. Ain't you glad your are a member? I guess it's worth while.

Should hospitals be licensed by the state, with definite standards justifying their existence and supervision of administration? That is a question we would like to hear discussed. We now license barbers, butcher shops, soda fountains, etc., for the purpose of protecting the peoples' health. Why not hospitals? As it is, anyone can take a house or unused building, smear the inside with white paint, put in a few beds, a sterilizer and equip a pseudo operating room and then hang out the sign "Hospital," even putting out a street sign, "Quiet: Hospital Zone." People are admitted and any old doctor can send in a patient, operate or treat him and nothing is said. That very same doctor is probably bared from the accredited hospitals because of deficient education and skill—the patient pays the price. We repeat, why not State Licensed Hospitals under control of the State Commissioner of Health with definite administration regulations and prescribed qualifications for attending staff members. What are your opinions thereon?

Mingle about and you are constantly reminded of how little you know or how small your own world is. We can't know, see or expand as we might wish. Our own work hems us in a somewhat narrow lane, seemingly bounded by a 16-foot fence. It is possible to scale the fence by means of two agencies—one diversified reading and the other, talking or rather listening to the other fellow. One man told us that the plumage of Michigan birds were undergoing color changes and losing their former brilliancy. The woodpecker no longer possesses the brilliant plumage of 10 years ago. Why, destruction of our forests—more sunlight, and of course now we know, only we hadn't noticed, compared or thought. Why are we in a deficient iodine zone? Same reason—more sun upon our vegetable plants. Then the other fellow, a clothier, experiments with the penetration of sun rays through cloth material and cites some interesting facts due to the absence of sun rays to all parts of our body. We grasp the point but instead of wearing the right cloth material we increase our office practice and prevent rickets, etc., by Quartz light treatments. Supposing we all read a little more and seek opportunities of listening to the other fellow.

Physicians treating venereal disease cases have frequently expressed a need for a pamphlet containing instructions and advice to be given to venereal disease patients. Due to the nature of these diseases and the regimen which proper treatment requires, the need for such a publication has long been apparent. Some time ago the U. S. Public Health Service prepared a pamphlet known as, "Important Confidential Information" expressly for this purpose. The leaflet

is in two parts, one dealing with gonorrhea and the other with syphilis. Advice is given among other points on the following: Importance of continuing treatment until cured, proper diet while under treatment, proper care to prevent the spread of the disease, the futility and danger of quacks and self treatment, sex conduct and marriage.

Many physicians have found this publication a valuable aid in securing the co-operation of the patient while under treatment and also as an aid in holding the patient until cured or rendered non-infectious. Copies of this publication are available from most State Departments of Health or they may be secured by writing to the U. S. Public Health Service, Washington, D. C.

The first General Section meeting was held in the ball room of Hotel Olds, Lansing, at 9:30 o'clock, President Darling presiding.

President Darling: Please come to order.

We have met together here for a purpose, to test the value of this state meeting, what it means to us and to the profession in general. We are here to measure up with what we were a year ago, to see if we made any advancement ourselves and to discuss the advancement that has been made in medicine in general. This time we are going to take a little different view perhaps from what we have in the past. We are going to examine ourselves a bit and see what the public thinks of us. The public will probably tell us. We have seen some indications of that in the press this morning. They seem to have a very good opinion of us, and if we can sustain that while we are here in Lansing, we will do pretty well. Aside from a few, I think that we can do that all right. (Laughter) I didn't mention who these were, but I think that you will understand what I mean.

Now the aim of this society is to spread the knowledge of medicine over this state and not spread it too thinly. Of course, there are places where it may get very thin. There are a number of members of this society and a number of members of the profession who are not with us today and we should say a word for them. We should make excuses for them because many of them probably have the proper excuse. I know that some of them used to have excuses when they were students. (Laughter) I presume they will be just as ready with excuses now as they were then.

The method of spreading the gospel of medicine to the people nowadays is so great that no person can be excused from not knowing something about health beside the lesson which he finds out by practicing upon himself. This may be spread in so many ways and yet there are some places benignly missed. I am very earnest in my desire to have this examination of people in the schools, of children in the schools. I believe that from there we are going to build up a wonderful condition in a few years. We should remember that all progress in medicine has come very slowly. It took thousands of years to learn some things and they are not very well learned yet. So we shouldn't be disheartened if things don't move as rapidly as we wish.

The knowledge of medicine comes to the profession through medical journals. A medical journal isn't simply a subscription. To get the value of a journal you need to take the wrapper off and peruse the journal, not the wrapper. The cutting down of articles in the journals makes it possible for you to get the gist of almost everything that is written in the present day. You are in touch with the whole world of medicine through your medical journals. One should read

them with care, and it takes only a few minutes every day to make you well acquainted with the medical literature. These are some of the things that we should keep in mind, the economy of time, the economy of reading if we are to know about what is going on. We should be careful about that.

I might go on and talk to you for some time along this line, but our meeting is in progress and it is now time to call on the other speakers.

Thoughts while strolling through several hospitals. While in certain respects the form of this comment may mimic a certain McIntyre's column in daily papers, it is not an attempt at imitation. Imitation is said to be flattery and we are not disposed to flatter O. O. M., because his hashheesh does not as a rule merit such praise. However, people read it and want it so newspapers pay for it, much of it is pure rot; so may be is the following: Scrub women wearing flesh colored silk stockings while moping up floors. Charity ward with florists flowers at bedside representing expenditure of some \$40. Florists make the money while hospitals give service free. Internes with duck coats about as clean as waiters in a Greek restaurant when noon rush is over. Nurse applying rouge to her face before entering men's ward. She might better visit the plastic surgery department and have her features corrected more enduringly. Used bed pan on head stand beside patient's bed. Telephone operator; "Condition same," bang goes connection: wonder what anxious inquirer on the other end of line thought? Interne drops 500 cc. flask of citrated blood just about to be given to recipient. More spilled gore at \$15 per to donor. Unanswered call light signals along corridors; this is common sight in all hospitals. Operative case still under ether, vomiting and unattended. Wonder if he chokes or develops an inspiration pneumonia? Internes emergency orders reveal great reliance upon pyramindon, allanol, sodium bromide grains III, nux vomica, M V, antiphlogistine, and a dozen other proprietaries and doses that are ineffective, no wonder patients rant on about terrible suffering. Blood pressure outfit with leaking bulb. Suture scissors that won't cut. Tissue forceps from the junk yard. Vanished bandage scissors. "Hole-ly" rubber gloves. Fish and corned beef on Friday. Hot dogs for Thursday night's tray. Chikory coffee. Tire off dressing cart, same on stretcher. Utility room cluttered with—well you all know how it is a catch-all for whatever a nurse has in her hands. Spring breezes (?) in the maternity nursery accompanied by a lusty chorus from the coterie of new-borns. No napkins so we use a towel in the emergency. Two undertakers wanting to load the same body. Surgeon's dressing room filled with cigaret smoke and stories. Doctor's cloak room filled with cigar smoke with internists seriously discussing slump in business. Record room with 160 incomplete records waiting completion. Laboratory with usual array of "removal specimens" and a fetus or two. An emergency "D and C" and appendix. Surgeon giving an outside doctor theater tickets. Medical man inviting same doctor to his club for lunch. Wonder why? No more thought's just now—it may have been your hospital because it sounds familiar—but 'taint.

One of our cities held a centennial celebration last month. In connection therewith a booklet was prepared setting forth historical facts and recorded factors that influenced the city's development. The outstanding factors enumerated were individuals, banks, factories, commercial houses and stores, lawyers, engineers and clergy. A scant mention was

made of the hospitals. We are wondering how long it will be ere writers, officials and human beings will realize and recognize that our modern civilization with all its luxuries, our cities, towns and hamlets, business, trade, transportation and life of today have been made possible only through the achievements of the medical profession. That without the benefits of scientific medicine, none of our present boasted achievements would have been possible in the degree now existent. In this instance we know that the insistence and effort by the local doctors secured a water system that eradicated typhoid. That similar effort in regard to vaccination obviated recurrence of the severe smallpox epidemic of 25 years ago, and that all the efforts for preventative measures to conserve health makes possible this city's prosperity and growth. In the centennial celebration this medical factor is ignored. But light is dawning and recognition will be forth coming. We have but to continue our educational efforts. The following editorial from The Saturday Evening Post bids courage and continuousness of effort:

PROLONGING LIFE

We cannot be too grateful to the scientists and physicians who work for humanity. A man of large affairs, supposed to be chiefly interested in finance and industry, astonished his dinner companions one evening by asserting that the greatest man in the United States is one of whom most of them had never heard—a medical consultant in an eastern city. Perhaps the halos should be transferred from statesmen, explorers, actors and prize fighters to this and other medical leaders.

Yet this wisdom is still in its beginnings. Even the common cold is like an unknown planet. If man's intelligence is measured by his absolute knowledge of his own diseases, it is very feeble.

But lack of knowledge is not the only bar to prolonging life. If we knew all, we should not have time or strength to apply it. There are said to be 212 causes of ache or pain in the lower back. In any given case of backache, who will take time and trouble to cover all of them and thus isolate the cause?

Frequent physical examinations, preventive medicine, group medicine and community clinics of one sort and another are advocated as means to prevent disease and prolong life. But social machinery is unequal to the task of putting every individual in as perfect a condition as even our present limited knowledge permits.

It is wise to be conservative and face the barriers that lie ahead. But it is inspiring to know that so much can be accomplished by mere organization, by the provision of facilities that require only thought, care and financial resources. Many lives, especially of infants, have been saved simply by spreading education. A disease such as cancer baffles the scientist, but reduction of infant mortality, to which the lengthening average of life is so largely due, has followed simple additions to general education in hygiene.

Then, too, the increasing effectiveness of public-health service—federal, state and municipal—is a little appreciated factor in stretching the span of life. Public health service goes about quietly 24 hours a day preventing trouble. When dread epidemics get a foothold, as they so often do, there is a silent but swift and unusually effective concentration of defensive measures which the public does not sufficiently realize.

It is a fair question whether modern man has really turned enough of his energies to his own physical preservation. Countless victories over nature make us

jubilant. We have telephones, automobiles and radio sets. Material prosperity in this country is the wonder of the ages. But what are financial and industrial victories if we cannot defeat the common cold? We exult over relativity and advanced of atomic structure, but to what advantage if our own physical, nervous and mental organisms are not equal to life's strain?

Statement of the facts and opinions agreed to by the International Meeting of Cancer Control held at Lake Mohonk, N. Y., September 20-24, 1926—Although the present state of knowledge of cancer is not sufficient to permit of the formulation of such procedures for the suppression of this malady as have been successfully employed for the control of infectious diseases, there is enough well established fact and sound working opinion concerning the prevention, diagnosis and treatment of cancer to save many lives, if this information is carried properly into effect.

1. The causation of cancer is not completely understood, but it may be accepted that for all practical purposes cancer is not to be looked upon as contagious or infectious.

2. Cancer itself is not hereditary, although a certain predisposition or susceptibility to cancer is apparently transmissible through inheritance. This does not signify that, because one's parent or parents or other members of the family have suffered from same or succeeding generation.

3. The control of cancer, so far as this subject can cancer will necessarily appear in other persons of the be understool at the present time, depends upon the employment of measures of personal hygiene and certain preventive and curative measures, the success of which depends upon the intelligent co-operation of the patient and physician.

4. Persons who have cancer must apply to competent physicians at a sufficiently early stage in the disease in order to have a fair chance of cure. This applies to all forms of cancer. In some forms early treatment affords the only possibility of cure.

5. Cancer in some parts of the body can be discovered in a very early stage, and if these cases are treated properly the prospect for a permanent cure is good.

6. The cure of cancer depends upon discovering the growth before it has done irreparable injury to a vital part of the body and before it has spread to other parts. Therefore, efforts should be made to improve the methods of diagnosis in these various locations and the treatment of the cancers so discovered.

7. The public must be taught the earliest danger signals of cancer which can be recognized by persons without a special knowledge of the subject, and induced to seek competent medical attention when any of these indications are believe to be present.

8. Practitioners of medicine must keep abreast of the latest advances in the knowledge of cancer in order to diagnose as many as possible of the cases of cancer which come to them.

9. Surgeons and radiologists must make constant progress in the refined methods of technic which are necessary for the diagnosis and proper treatment not only of ordinary cases but of the more obscure and difficult ones.

10. There is much that medical men can do in the prevention of cancer, in the detection of early cases, in the referring of patients to institutions and physicians who can make the proper diagnosis and apply proper treatment, when the physicians themselves are unable to accomplish these results. The more efficient

the family doctor is, the more ready he is to share responsibility with a specialist.

11. Dentists can help in the control of cancer by informing themselves about the advances in the knowledge of the causes of cancer, especially with relation to the irritations produced by imperfect teeth and improperly fitting dental plates. They can also help by referring cases of cancer which they discover to physicians skilled in the treatment of cancer in this location. It may be doubted whether all dentists fully realize the help which can be obtained from X-ray photographs in revealing not only the state of the teeth but the condition of the bone surrounding them.

12. Medical students should be instructed in cancer by the aid of actual demonstrations of cancer patients, and this to a sufficient extent to give them a good working knowledge of the subject.

13. The most reliable forms of treatment, and, in fact, the only ones thus far justified by experience and observation, depend upon surgery, radium and X-rays.

14. Emphasis should be placed upon the value of the dissemination of the definite, useful and practical knowledge about cancer, and this knowledge should not be confused nor hidden by what is merely theoretical and experimental.

15. Efforts toward the control of cancer should be made in two principal directions: (1) The promotion of research in order to increase the existing knowledge of the subject, and (2) the practical employment of the information which is at hand. Even with our present knowledge many lives could be saved which are sacrificed by unnecessary delay.

Among Our Letters

NOTE—This department is the open forum of our members. Your communications and discussions are welcomed. Anonymous communications cannot be accepted, though at times names may be omitted by the Editor. Personalities will not be printed and responsibility for opinions is not assumed. We invite your interest in this department. Address: The Editor, Journal, Michigan State Medical Society, Suite 1508, Grand Rapids National Bank Bldg, Grand Rapids, Mich.

Editor of The Journal:

I wish to thank the State Society for the compliment paid me in making me an honorary member of the society.

Yours respectfully,
D. Emmett Welsh, M. D.

Editor of The Journal:

Your kind letter of September 23rd, received, and the compliment extended to me by the House of Delegates is duly appreciated. I also appreciate the kind words which seem personal from you.

Truly yours,
R. H. Spencer.

Editor of The Journal:

I wish to thank you most sincerely for the kindly manner in which you advise me of the honor conferred upon me by the State Medical Society.

I accept the honor with pleasure and hope to con-

tinue in the future as in the past, strongly ethical, again thanking you, I remain.

Faternally yours,
Eugene Smith.

Editor of The Journal:

I have your letter, and note what you say regarding re-imbursement for expenses.

I feel that after such an enjoyable time at your meeting I would prefer to consider the trip a part of my vacation.

Assuring you of the pleasure which it gave me to come, I am

Sincerely yours,
Irvin Abell.

Editor of The Journal:

I have received your kind letter of the 20th inst. informing me of my unanimous election as delegate to the A. M. A. One majority is however hardly unanimous but it was enough.

I thank you for the congratulations and trust you that my service to the A. M. A. and the state society may prove to us mutually agreeable and beneficial.

Very cordially,
J. D. Brook.

Editor of The Journal:

This is to acknowledge your letter notifying me of my appointment as a member of the Committee on Medical History. Will you kindly convey my thanks to President Jackson and at the same time assure him that I stand ready to do whatever I can to carry out the purpose for which the said committee has been appointed. Would you kindly write me in detail in regard to what is really expected of this committee? I had several years ago worked up the History of Medicine in Wayne county which was published in a work gotten out by C. M. Burton entitled The History of the City of Detroit. I remain,

Sincerely yours,
J. H. Dempster.

Editor of The Journal:

I am in receipt of your letter advising me of the high honor the Michigan State Medical Society has bestowed upon me at their annual meeting held in Lansing, September 14, 15 and 16th, by electing me as Honorary Member of the State Medical Society.

The Michigan State Medical Society has done much to create a feeling of co-operation among the medical profession, which was almost entirely lacking 35 years ago.

The young man just out of college with his latest theories and the older one with his years of experience will now talk it over with mutual benefit to both.

Thanking the society through you for this high honor and a wish for its prosperity.

I am fraternally.
R. E. Miller.

Editor of The Journal:

I am just in receipt of yours informing me that the State Medical Society had elected me an honorary member of the society.

I assure you that it gives me the greatest pleasure to extend to you and through you to the society my sincere thanks and appreciation for the great honor thus conferred on me. In years gone by the society had my support and attendance, and I gloried in its achievements. Since the years have accumulated I have found it quite impossible to attend its meetings but I have always a warm spot in my heart for my

old associates of long ago. Thanking you again for this expression of appreciation and wishing the society the grand success in the future it has met with in the past,

I remain most sincerely yours,
J. E. Clark.

Editor of The Journal:

A recent experience prompts me to issue this word of warning to our medical brethren.

Some time ago an agent of the World Bonded Adjusters, collection agency of Chicago, came to me and wanted some of my accounts for collection. Their commission to be 50 per cent on all collections and nothing more in the way of expense.

They collected \$3 and instead of paying me my little \$1.50, state that this does not cover their "docket fee" for office filing.

I told them I would publish this misrepresentation on their methods of doing business but it did not bring a rise out of them.

That \$1.50 would buy two golf balls and as many of mine are in the rough, I need 'em.

Yours,
Starr K. Church.

Editor of The Journal:

You will remember that some time ago you received a copy of the Beaumont lectures given at the Wayne County Medical Society by Drs. Mayo and Plummer which was reviewed in the State Journal. We still have a large number of these books on hand and it is the desire of the committee to distribute as many as possible throughout the state. If this is not contrary to your advertising policy of the Journal might we request that you give this matter a little publicity in the Journal. The price of this series is \$1.50.

We believe that a copy of the Osgood lecture, "The Evolution of Orthopaedic Surgery," was forwarded to you but a review of the book in the Journal as far as we know has not been forthcoming. We also have a number of these books for distribution. Price, \$2.

Yours sincerely,
E. C. Baumgarten, M. D.,
Lectureship Foundation Committee.

Editor of The Journal:

Replying to your letter of October 7, will advise you that both dates offered you by the hotel at Mackinac Island conflict with the Clinic Week of the Detroit College of Medicine and Surgery. The commencement exercises will be held on June 16, 1927.

It seems to me however, that this should make no particular difference in the assignment of a date for the annual meeting of the state society since comparatively few of the Detroit physicians or even of the teaching staff itself of the college attend the commencement exercises or the talks and demonstrations given during the Annual Clinic Week.

Certainly the Detroit College of Medicine and Surgery would on no account wish to interfere with the plans of the Michigan State Medical Society.

Very truly yours,
W. H. MacCraken, M. D., Dean.

Editor of The Journal:

Your letter announcing my election as honorary member of the Michigan State Medical Society, at the 106 Annual meeting recently held at Lansing, came to hand this morning.

Words cannot express my appreciation of this action of the society.

To have been an active member of the society for these many years has brought to me one of the deepest and sweetest blessing of my life.

My association with the members of the society has raised my ideals and added each year to my professional equipment.

A wonderful fullness and richness has come to me which only could have come by such an association.

I must not forget, my dear doctor, to express to you my appreciation of the many kindnesses which you have been "guilty" of showing me during the past years.

Yours most sincerely,

C. B. Stockwell.

Editor of The Journal:

I am sending this letter for publication in the "Michigan State Medical Journal" so that the contained information may reach all the physicians of Michigan.

There has been established at the Children's Hospital of Michigan an "Asthmatic Clinic" for the study and treatment of asthma in children. To date it has been operating for about one year with rather eminent success.

We are desirous of obtaining a larger number of patients; we therefore invite all physicians in the state of Michigan to refer to us any asthmatics they would like to have studied and perhaps treated.

Careful histories are made, physical examinations done, protein skin sensitization tests made and a new form of treatment carried out.

"The Clinic" is an entirely free one. Our desire is altruistic, and we also wish to obtain a larger amount of material for study which must result in increased efficiency in our care of the patient.

Very cordially,

M. B. Kay, M. D.

Medical Director of the Out-patient Department,
Children's Hospital of Michigan.

Editor of The Journal:

I acknowledge with thanks your letter in which you speak of me being appointed chairman of the Committee of Venereal Prophylaxis.

I appreciate the courtesy shown me very much indeed but at the same time I feel that it is a very responsible position and that if one did what he should, it would require a great deal of work and effort. It grieves me that as a profession we are not accomplishing what we should in the prevention of venereal disease. Just recently we had an epidemic of gonorrhea in our own high school where 70 boys were infected by three girls. Such a thing ought never to exist.

I, personally, would like to put forth some effort to stimulate every practising physician in Michigan to lend his influence in every way possible to check the spread of this infection. I believe that the medical profession can do it if they would see to it that every man or girl that has an acute infection was properly restricted so that they could not transmit it.

Hoping that I may be able to do something and thanking you for this courtesy, I am

Very truly yours,

W. F. Martin, M. D.

Editor of The Journal:

I am most happy to be in receipt of your esteemed favor of yesterday advising me that the House of Delegates has elected me as an Honorary Member of the Michigan State Medical Society.

May I, by your kindness extend to the members of the association my sincere thanks for the distinct honor thus conferred and to say that I profoundly appreciate

their very kind thought of me. I fully realize that I am not in any wise worthy of this high distinction, either in character or by achievement, but I take it that your action is rather by way of a memorial of the nearly one-quarter of a century that I was an active member. I became identified with the Michigan State Medical Society in or about 1869, continuing in that relation till I changed my residence from Michigan to Florida where I continued practice till 1900 when the infirmities of age called a halt. Since then and for more than another quarter of a century I have been a superannuate, but during all this period of inactivity I have never lost my interest in, or love for the "Healing Art" and would delight to meet with you in session did not the disabilities of age forbid that pleasure.

Repeating my thanks and appreciation and extending to each of you my kindest regards, I subscribe myself.

Your Associate,

John P. Stoddard, M. D.

Editor of The Journal:

Attached is a clipping from the Berrien Springs Journal published October 14, 1926. It is rather interesting. You will note that 69 tonsillectomies were done at free clinic at a saving to the patients of \$3,105.

You will note that a number of others were done whose hospital expenses were paid by various clubs; you will note that the RED CROSS NURSE reports a wonderful year and takes and receives a lot of credit, but you will not see where the medical profession received even a thank-you-ma'am though they, the poor suckers, did all the work for nothing. I have been intimate with this charity stuff for years but I never heard of any of these organizations asking a grocer or the coal man to furnish goods for nothing, or even for half price.

Once upon a time I had charge of a very large investment business. We had a number of sucker lists. The doctors sucker list was the prize list. It still carries the highest premium where such lists are under or are for sale. There is a reason for that.

Yours cordially,

E. M. Cunningham.

RED CROSS NURSE REPORTS

BIG YEAR'S WORK DURING 1926

Miss Emma Arnold, Berrien County Red Cross nurse, in a report submitted to the county chapter for the year from October 1, 1925, to October 8, 1926, for the nursing service reported that 4,061 school children in the county had been inspected, and cards sent to the parents of all these children as to conditions of teeth, tonsils vision and evidence of the communicable diseases. Sixty-nine children were operated upon for removal of tonsils and adenoids at free clinics, with a total saving to patients of \$3,105. Thirty-two of the patients paid a total \$150 to help cover the cost of expenses. The number of home calls was 314.

The Rotary club, of Benton Harbor and St. Joseph, paid hospital expenses for 34 children operated upon for removal of tonsils and adenoids.

The Kiwanis club, of Benton Harbor, paid for glasses for seven children in the county.

Buchanan Kiwanis club paid expenses for six children operated for removal of tonsils and adenoids.

Editor of The Journal:

I am enclosing an announcement of the tentative program that I am sending each of the county medical societies.

The doctors on the partial list of speakers have all promised to present subjects that will be of interest both to the specialist and the general practitioner.

I am sorry that the exact subjects to be presented cannot be announced and since this program is as complete as possible at the present time, I will appreciate

ciate your giving it the best space available in your journal.

Your truly,
Highland Park Physicians Club,
Charles J. Barone,
Secretary.

Editor of The Journal:

Please read the following announcement at the next meeting of your society:

You are invited to attend the first annual clinic of the Highland Park Physician's club, to be held at the Highland Park General hospital, Thursday, December 2, 1926, from 8 a. m. to 8:30 p. m.

A partial list of the speakers is as follows:

Charles Gordon Heyd, M. D. of New York, N. Y.; Professor of Surgery at New York Post-Graduate Medical School and Hospital; Attending Surgeon of the New York Post-Graduate Hospital.

George W. Crile, M. D. of Cleveland Ohio; Professor of Surgery of the Western Reserve Medical College and Visiting Surgeon at Lakeside Hospital.

William Seaman Bainbridge, M. D. of New York, N. Y.; Surgeon of the New York Skin and Cancer Hospital and author of the text book, "The Cancer Problem."

John Osborn Polak, M. D. of Brooklyn, N. Y.; Professor of Obstetrics and Gynecology of Long Island College, and President of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons.

Irving White Potter, M. D. of Buffalo, N. Y.; Instructor of Obstetrics of the Medical Department of University of Buffalo, and Exponent of Version in Obstetrics.

E. P. Sloan, M. D. of Bloomington, Ill; Ex-president of Illinois State Medical Society, and an authority on Goiter.

James E. Sadlier, M. D. of Poughkeepsie, N. Y.; President-elect of the New York State Medical Society.

Arrangements are being made to obtain Dr. Smithies, of Chicago, Ill., who is one of the leading internists of the country.

The morning will be devoted to medical presentation and diagnosis of cases by internists. All visitors will be guests of the hospital at the noon-day luncheon. The dinner at 6 p. m. is to be held at the Detroit Golf club and the members of the county societies will be placed in groups at the tables. Following the dinner a lecture on some broad medical subject will be given, by a nationally known physician.

Please notify me of the number that will represent your county, so the proper arrangements can be made.

Yours truly,
Highland Park Physicians Club,
Charles J. Barone,
Secretary.

P. S.—Programs will be mailed when completed.

Editor of The Journal:

This is to officially inform you that at the meeting of the Council on Medical Education and Hospitals, which was held in Chicago, September 8, 1926, consideration was given to the premedical course in biology, such as that given at the Michigan State college at Lansing and which was recommended by the Michigan State Medical Society.

The secretary was instructed to inform you that inasmuch as no concerted effort had thus far been made to standardize courses for laboratory technicians, no

definite approval could be made. Nevertheless, the council believed that the offering of this course was a move in the right direction.

Very sincerely yours,
N. P. Colwell,
Secretary.

Council on Medical Education and Hospitals.

Dear Doctor Colwell:

This acknowledges receipt of your official communication of October 4th. I note that you say that no standardization has been effected by your Council for Laboratory Technicians and upon that basis you cannot pass any approval upon the course of biology as given at the Michigan college at Lansing.

May I suggest that it is about time that your Council did establish some such standardization in order to meet pressing present day demands. Why wait 15 or 20 years? It seems it would be highly important that you should initiate this thing at the beginning and right now is the time to do it.

I am therefore officially requesting you, on behalf of the Michigan State Medical Society, that your Council at a very early date promulgate a standard course for Laboratory Technicians. May I also ask you to advise when your council can take up this question in order that I may present the answer to the Executive Committee of our society. I trust that within the next two months such a standard may be formulated.

Yours very truly,
F. C. Warnshuis,
Secretary-Editor.

Editor of The Journal:

Your letter of October 6th has been received.

The Council's routine, as you doubtless know, is to take up no special lines of study excepting where instructions to do so have been received from the House of Delegates. This has been necessary with the Council's limited personnel and budget. Of course, an abundance of information has been collected on numerous problems bordering on the practice of medicine so that we also have collected considerable data in regard to schools for laboratory technicians. The best place for laboratory technicians to secure practical experience seems to be the clinical laboratory. Inasmuch as heretofore no standard had been fixed for clinical laboratories it was too early to take up the more detailed subject of the essential qualifications of those who were to serve in the laboratory as technicians. The "Essentials of an Approved Clinical Laboratory" have now been completed, however, so that the way is open, not only for the study of laboratory technicians but also the standardizing of roentgen ray laboratories, which is another important work for the early future.

In regard to schools for laboratory technicians, we have considerable data on file. At the higher extreme, courses are available in several prominent universities wherein students can prepare themselves as laboratory technicians at the same time they are working for the B. S. degree. For example, at the University of Chicago several young women to my knowledge have prepared themselves to an extent whereby they will doubtless prove to be highly efficient, either as physicians' assistants or as technicians in laboratories. At the other extreme are some schools which are of doubtful reputation.

An added complexity in this particular field is the evident need for different grades of technicians just as different grades of nurses are now deemed essential. Consideration will have to be given also to the qual-

ifications of the teachers in the various institutions and the facilities for practical work. Most important and time consuming will be the gathering of data which not see any possibility, therefore, that a standard will serve as the basis for a set of "Principles Governing Schools for Laboratory Technicians." I do which would prove either useful or worthy of endorsement could be prepared in so brief a time as two months. An abundance of material has already been collected which will serve as a beginning of the work, however, so that the matter can be pushed to completion just as fast as possible with the other lines of work which are now demanding so much attention.

Meanwhile, I will discuss the contents of your letter with Dr. West to see whether we already have sufficient authority to proceed with the work. Copies of the correspondence, also, will be sent to the members of the Council for their information and subsequent action.

Very sincerely yours,

N. P. Colwell,
Secretary.

Council on Medical Education and Hospitals.

Editor of The Journal:

I have been reading with considerable interest the minutes of the last state meeting and particularly that portion which covers the discussion opened by Dr. William Cassidy (Wayne) referring to the handling of charity cases by the profession generally and the University hospital in particular. There appears to be a deplorable lack of information regarding this situation not only among physicians themselves and the general public, but also among the elected representatives of the public.

The situation is about like this: When a physician in any community gets tired of supporting a community burden out of his own funds—the worthy poor, the unworthy poor, the dead beat, the malingerer—as a matter of self defense he turns them over to his local township supervisor, the superintendent of the poor, and the probate judge, and they are sent to the University hospital for whatever attention, medical or surgical, is needed and always a PROLONGED convalescence. In our county each township supervisor, thinking to save his township money by throwing these cases on the state, falls in readily with this plan but, like the ostrich hiding its head in the sand, he is deceiving himself and the tax payers whom he represents. These cases are not paid for by the state but by each county and believe me, they pay through the nose. In my county, Cass, these bills never come before the Board of Supervisors and when presenting this matter before them a year ago I found that none of them had ever previously seen one of these statements. Practically every one of them were very comfortable in the thought that the state was paying all the bills.

The majority of the cases I have investigated have cost the county from 200 to 2,000 per cent more than necessary. This sounds like a wild statement but it is absolutely true.

For example, Patient X—a drifter, single, works only when absolutely necessary, always out of funds, is struck by a train, scalp wounds, arm and leg fractures, dirty cantankerous, in every way undesirable, is brought to a local hospital. Following anaesthetic threatens to drink his urine if nurse does not give him water, etc., is sent to Ann Arbor. Months and months and months, special nurses at \$8 per day, special massages, \$15 for an anaesthetic, (we are glad to get \$10) and a prolonged convalescence. He re-enters the hospital of his own accord in September 1925 as an out

patient, diagnosis central choreoretinitis, hyperopia and presbyopia and you know what that means. According to the last report I had of him he was still there Dec. 16th. Out patients are taken care of at the Jennings hotel at \$3.50 per day plus, and the end is not yet. An expense to date of more than \$2,000.

Others go from here to take neo arsphenamin, three shots here would cost the county \$15 at Ann Arbor they cost railroad fare, three weeks at the Jennings, laundry, and perhaps a thermometer or two. I notice on all the bills rendered Cass county that thermometers sometimes average one a week for each patient. I have suspected that they were a part of the diet. I have too that the nurses have to pay for those they break, it may not be true, but they sure do eat up a lot of 'em.

I would suggest that the committee which was appointed to investigate go first to their county treasurer. There they will find all the data they need.

There is a sane, practical way of taking care of these cases at home and saving the tax payers in each county thousands of dollars besides leaving the money to circulate at home where it belongs.

There are other abuses, big ones, and they are growing in numbers every year. The man of property who cannot pay for medical, surgical, or dental care, but his children spectacles or orthopaedic appliances because he is buying several hundred dollars worth of new fruit trees, or a new automobile, or a new piano or radio, or perhaps he has to save his money to visit his relatives in Nebraska this fall, etc.

It is not a joke, it is not funny, it is a serious social situation and it affects the general practitioner particularly because it not only hits him professionally but he is also one of that group of sturdy tax payers who have to foot the bills for these wasters.

The only real joke in Cass County is the Cass County Medical Society. We figure on having a meeting or two every 25 years.

Yours very sincerely,

E. M. Cunningham.

State News Notes

Dr. and Mrs. J. W. Coman, Jr., are spending a few days fishing at Houghton Lake.

Dr. H. G. Berry is still away at his ranch in Alberta.

Dr. J. D. Bruce, Ann Arbor, addressed the Grand Rapids Rotary club on October 14th.

Dr. F. K. Lenfesty, has just returned from a trip by boat to Port Huron, Ontario, where he spent several days. He reports a fine time.

A dinner was tendered to Dr. J. H. Kellog, celebrating his 50 years of superintendency of the Battle Creek Sanitarium.

'Course you are going to attend the Post-Graduate Clinic at Ann Arbor on Nov. 11, 12, 13th. Do not forget to send in your enrollment.

The Highland Park Physicians club, Detroit, will

conduct a clinic at the Highland Park hospital on December 2nd.

Dr. W. J. Mayo, Franklin H. Martin and Andrew P. Biddle were the speakers at the dinner tendered Dr. Angus McLean of Detroit in celebration of his 40 years of practice in Detroit.

According to Dr. E. R. Weidlein, Director, Mellon Institute of Industrial Research, University of Pittsburgh, the firm of Johnson & Johnson, manufacturer of surgical supplies, New Brunswick, N. J., has established at the Institute Fellowship that will study the exact requirements of surgeons and other medical specialists in the way of sundries, with the joint aim of developing new supplies that are needed and of standardizing the products now in use. An investigation will also be made of the processes of renovating used supplies, and several other Industrial Fellowships of the institute will co-operate in devising satisfactory procedures.

Dr. Frederic H. Slayton (M. D., Rush Medical college) will be in direct charge of this comprehensive research. The Fellowship will be operated in a totally unbiased and independent manner, in accordance with the Mellon Institute system, and all its investigations will be conducted primarily for the benefit of the public. It is the plan to report the results in appropriate periodicals as the various phases of the studies are concluded.

In carrying on this work, Dr. Slayton and the Institute's Executive Staff invite the concurrence of all interested organizations. They are especially desirous of securing the close collaboration of hospital executives and of members of the medical profession.

SHORTENING QUARANTINE PERIOD FOR DIPHTHERIA CONVALESCENTS AND CARRIERS

Sanford Withers, John R. Ranson and Ethel D. Humphrys, Denver (*Journal A. M. A.*, Oct. 16, 1926), advocate the treatment of diphtheria carriers by means of the roentgen ray. A report is made on 54 cases so treated. Following such treatment there were only two febrile reactions, simulating an acute tonsillitis. Neither of these lasted more than one week, and each occurred in patients having pulmonary tuberculosis. As a rule, the treatments were given at the rate of from 50 to 100 milliamperes minutes to each side of the head, weekly. Of 22 patients, 10 of whom were carriers, all became negative in an average time of 15.8 days after having been positive an average of 43.3 days. If the experimental cases and those patients having foci of infection other than the pharyngeal lymphoid tissue are eliminated, there are left 17 patients who were positive an average of 49.7 days who became negative are remained negative in an average of 9.5 days after the first roentgen-ray treatment was given. In the carriers, of which there were 42, all but three became negative during the three months observation period. This is a percentage of 85. If those carriers who had experimental small doses of roentgen ray are eliminated and those with a complicating pathologic condition also are disregarded, there are left 23 carriers with an average positive cul-

ture period of 60.9 days who became negative in an average of 10.9 days after the first roentgen-ray treatment.

CHRONIC ULCERATIVE COLITIS

Louis R. Buie, Rochester, Minn. (*Journal A. M. A.*, Oct. 16, 1926), reviews in detail the clinical history of this form of colitis. Chronic ulcerative colitis is a disease produced by a specific micro-organism, the lancet-shaped diplococcus of Bargen. The appearance of mucosa of the rectum and sigmoid is characterized by four phases during the active period: (a) hyperemia, (b) edema, (c) military abscesses and (d) military ulcers. A stage of remission or healing of the ulceration leaves a glazed, scarred (pitted) mucosa. The granular ulceration, pitted scars, and contraction of the lumen of the bowel are pathognomonic. The sigmoidoscope is the most valuable means of diagnosing the disease. Rarely will roentgen-ray examination or any other method reveal it when it cannot be diagnosed through the sigmoidoscope. Practically all cases can be diagnosed with this instrument alone. The most rational form of treatment consists in (a) the eradication of foci, (b) special diet and general supportive measures, (c) specific vaccine or vaccine filtrate as the curative agent, (d) local medication through the sigmoidoscope to cure the secondary infective type of ulcer, and (e) ileostomy only as a means of saving life.

POST-GRADUATE CLINIC

UNIVERSITY HOSPITAL



NOVEMBER 11, 12, 13

OUR SOCIETY BUSINESS AND ACTIVITIES

HARVEY GEORGE SMITH
EXECUTIVE SECRETARY

NOTE: This Department will each month contain a discussion and report of our Society work and planned activities. Your interest and correspondence as to your problems is solicited.

PREVENTIVE MEDICINE! IS IT A MYTH?

Does the medical profession believe in preventive medicine is a question that arises in the mind of laymen, when they see the increasing number of hospitals, sanatoria, and especially when sickness comes into the home. They have forgotten the record made by the medical profession. Their comparisons are of the moment, the past is usually recorded in only, those good old days. Do they ask, who gave them pure drinking water, free from typhoid germs; who eliminated yellow fever with its claim of thousands annually through its mosquito carrier; who eliminated small pox, the pot marked face, from the civilized countries, diphtheria, that in the past has taken its toll in large numbers among infants and younger generations; scarlet fever, now almost almost a vanishing spectre? These they have forgotten. Little do they remember of the surgery of the past and know of surgery of the present. The contributions of men of medicine have never been fully known. Where are Pasteur, Jenner, Osler, Reed and all the others? Recovery from disease now and always has been, you were lucky to become well, God was willing, you have a strong body, the fates are with you. And to add the mysterious and miraculous, the camp of the Fundamentalists are heralded the orders, beware of science—the destroyer of the human race.

Scientific medicine, has not yet been recognized by thousands of "doubting Thomases." Preventive medicine to them is like a dream that can never come true.

The doctor has failed to educate the public as he has continued to advance his science, to heal the ill and to relieve suffering. Preventive medicine will come only as the medical profession as a whole becomes the educator of the public. The process is one of teaching and demonstration. For the past year, even the past five years the medical profession within its own borders has discussed physical examinations of the apparently well. But the public thinks of a physical examination as an insurance ex-

amination, to benefit the insurance company and not the insuree. A natural thought, for the insuree never knows what has been found. The answer is, "accepted" or "rejected."

To prove the belief of the medical profession every doctor must himself enter himself into the Periodic Physical Examination program. Every year on his birthday he must have his annual inventory, he must have his instructors in health from one or two conferees. There are in the Michigan State Medical Society 3,000 members. They should this year have their physical examinations.

County Medical Societies are at work in this field. Thirty-four have already conducted special programs to advance the field of preventive medicine. Eight counties have organized themselves to conduct physical examinations for their own members. The societies that have taken this action are the following:

Macomb, Saginaw, Oakland, Lapeer, Lenawee, St. Joseph, Hillsdale and Branch. Three thousand doctors have had their physical examinations as the aim and goal for the medical profession of Michigan. Demonstration of belief of action and knowledge lead to education and conviction of the public.

COUNTY MEDICAL SOCIETY OFFICER CONFERENCES AND REPORT

Twenty-two County Medical Societies have been visited during the period from September 21 to October 15 for the purpose of study, determination of problems and difficulties, accomplishments and results attained during the past year. The counties visited are the following:

Oakland
Macomb
St. Clair
Huron
Tuscola
Lapeer
Genesee
Clinton
Monroe
Lenawee
St. Joseph

Cass
Berrien
Branch
Hillsdale
Mecosta
Osceola-Lake
Manistee
Mason
Oceana
Newaygo

One year ago all County Medical Societies were advised to adopt the Minimum Program as a basis for work. All of the above societies except Huron, Tuscola, Clinton, Cass answered that the program had been adopted and that it had proved valuable. These are some of the results obtained: Regular scientific meetings were being held so that the minimum requirement of 10 meetings would be met by the end of the year. Better and more regular meetings were conducted. Several societies Genesee and Mecosta, conducted programs each two weeks. All but six societies had conducted or agreed to conduct special programs on Physical Examinations of the Apparently Well. Eleven societies are at work through special committees arranging for the physical examination of each member by two fellow members. Under the heading of social and informal activities, one society, Oakland, held a joint meeting with the Bar Association, the Bar Association reciprocated and now the "Goose hangs high in Oakland County." Picnics were conducted by Oakland, St. Clair, Lapeer, Lenawee, St. Joseph, Berrien, Branch, Mecosta, Mason, Oceana and Newaygo Societies. All the societies that have adopted the Minimum Program found that a luncheon or dinner meeting was most satisfactory. Oakland and Genesee Counties organized one Scientific team each, and presented programs that were outstanding in character before the Macomb and Alpena County Medical Societies. Each of the other societies has agreed to organize a team and give a program for neighbor societies. More results will be accomplished in this field during the year to come.

Under the section, Public Health Information, the least amount of organized work has been done but at the same time much interest was expressed. Genesee and Mecosta County Societies lead all other societies in this activity. Genesee during the past year has conducted the six lecture per high school program in conjunction with the Extension Department of the university and Mecosta has had every member give talks before Parent-Teacher Associations high schools, and several other groups. Lenawee conducted one Association of Commerce and Boy Scout meeting and supplied a speaker on the Value of the Human Body. Several of the other societies have done limited work.

This record of the above societies is an enviable one and yet it does not represent a completed minimum program by any one society. Of all the counties visited Genesee leads with Mecosta a close follower. During the coming year each of the other so-

cieties have plans under way that should make them running mates in accomplishment with the best.

To further accomplishment and results, in each society the following recommendations were made:

1. That each society organize a program committee with the president and secretary as members or the president appoint a special committee with the secretary as member. Such a committee to meet each two or three months for the purpose of developing a regular program in Post-Graduate education which will be of direct benefit to the membership. Such activity is to replace the usual temporary arrangements that are indulged in by county societies, or meeting to meeting plans. Two members are to report their most interesting cases at each meeting. Such an organized plan for the conduct of the scientific part Minimum Program will make for constructive Post-Graduate Instruction each year.

2. A special committee appointed by the president is to organize the program for physical examinations of the members and co-ordinate with the Health Education Committee plans for lectures in the special field of preventive medicine.

3. Each society was advised with the exception of Genesee and Mecosta to appoint a special committee to study plans and methods for presenting to the laity of the counties information on health, preventive medicine, history of medicine, biographies of men like Pasteur, Jenner, Osler, Reed and Koch. Further, these committees are to secure speakers for various local organizations and in co-operation with the high schools and where possible with the Extension Department of the university present a program of six lectures before each high school student group in the respective counties. Eight committees were appointed at the time of visits.

4. Secretaries were requested to give publicity to local newspapers on activities of the County Medical Societies and to report all accomplishments to the state office.

The officers of the societies visited, especially those of societies with accomplishment, added suggestions that are valuable to the conduct of society programs. Lenawee county claims that a program of one hour duration will maintain interest whereas a long drawn out program reduces interest and also attendance.

A number of the society officers stated that Scientific Programs to be successful must start on time and conclude within a specified time. In order to give responsibility to members and at the same time use the

practical experience of the members for the benefit of all members, Lenawee for the first time has agreed to have two members discuss their most interesting case reports, at each meeting. Each report to be limited to 10 minutes.

Observations—Constructive County Society Programs result when the president and secretary take definite interest in the work of the society. Further, when appointed committees assume responsibilities of their offices, meet, adopt a program and then work the program, and further, when all activities run on schedule and not with indifference and from one-half to an hour behind schedule. The Minimum Program provides the most satisfactory basis for county society accomplishment that has yet been developed.

Those societies where jealousies exist and fellowships have vanished are not conducting an organized program of any kind what so ever. A friendly attitude, the county society interest first spirit provides the membership with success in the profession and respected relationship with the public and advances scientific medicine.

THE MANISTEE POST-GRADUATE CONFERENCE

The Post-Graduate Conference at Manistee on Thursday, October 14 was the third to be held in the Ninth Councilor District since the inauguration of the program of Post-Graduate Conferences in the autumn of 1924. Thirty-eight doctors were present representing all the county societies of the district. The honor for attendance this year, went to the Grand Traverse, Leelanau Society. Fourteen of the members recorded present after driving 75 miles. Mason county was at the bottom of the attendance column, being represented by only three members. Due credit must be given to the Councilor Doctor Ricker who with a car filled to capacity with Cadillac doctors lost his way in the "Skiberians," but located himself by the moss on the north side of a jackpine and rolled in to the meeting about a half hour late. Doctor Fairbanks the first one to arrive said, "You know this is great work you are doing. These Post-Graduate Conferences are the best medical meetings I have ever attended. I wouldn't miss one unless I were sick. I am busy, too, I am mayor of our little city of Luther, am on the Board of Supervisors and have a big practice, but in spite of all this I will always be on deck when the Post-Graduate Conference is to be held. I have been at all three so far." The doctor who is interested in the advancement of his science is always pres-

ent, unless he is ill or an emergency keeps him away. Doctor Nicholson from over in Oceana county was here though he did not receive a program. He does not belong to the district was the reason, but it is an illustration of the fact that the active men in the medical profession are ever alert to advance their own science. The hand writing on the wall indicates that the inactive members would do well to become active.

And Grand Traverse was right on the job when they said, "the next conference will be held at Traverse City."

The following doctors attended and the following program was presented:

MICHIGAN STATE MEDICAL SOCIETY POST-GRADUATE CONFERENCE

Manistee—October 14th, 1926, at Hotel Chippewa

- 10:15 Opening Statements—Otto L. Ricker, M. D., Councilor, Chairman.
10:30 Prenatal and Postnatal Care—By Member of Obstetrical Staff, University Hospital, Ann Arbor.
11:00 Peptic Ulcer—Medical Management, Burton R. Corbus, M. D., Grand Rapids.
11:30 The Acute Emergencies of the Eye—John R. Rogers, M. D., Grand Rapids.
2:00 Feeding the Abnormal Infant, Homer T. Clay, M. D., Grand Rapids.
2:30 Common Laboratory Methods and Practical Values in Diagnosis—William LeFevre, M. D., Muskegon.
3:00 Modern Obstetrics—By Member of Obstetrical Staff, University Hospital, Ann Arbor.
3:30 - 3:40 Recess.
3:40 Contagious Diseases—Diphtheria and Scarlet Fever—Homer T. Clay, M. D., Grand Rapids.
4:10 The Appraisal of the Tonsil—John R. Rogers, M. D., Grand Rapids.
4:40 The Interpretation of Abnormal Blood Pressures and Treatment—Burton R. Corbus, M. D., Grand Rapids.

REGISTER

Name	Address
Earl Fairbanks	Luther
H. D. Robinson	Manistee
H. A. Ramsdell	Manistee
L. Swanton	Traverse City
F. P. Lawton	Traverse City
A. Holm	LeRoy
G. W. Brooks	Tustin
D. A. Jamieson	Arcadia
H. MacMullen	Manistee
A. A. McKay	Manistee
A. G. Burwell	Spring Lake
J. F. Carrow	Cadillac
T. Y. Kimball	Manton
Otto L. Ricker	Cadillac
E. F. Sladek	Traverse City
F. Holdsworth	Traverse City
E. L. Covey	Honor
J. Waldemar Hansen	Manistee
E. B. Minor	Traverse City
C. C. Jensen	Manistee
J. J. Brownson	Kingsley
J. H. Nicholson	Hart
J. W. Gauntlett	Traverse City
F. G. Swartz	Traverse City
E. S. Thirlby	Traverse City
H. B. Kyselka	Traverse City
G. A. Holliday	Traverse City
H. B. Hoffman	Ludington
Lewis Ramsdell	Manistee

GUESTS

Mrs. A. G. Burwell	Spring Lake
Dorothy F. Johnston, R. N.	Cadillac
Mrs. Ed. Talbot, R. N.	Manistee
Miss Hilda Jean, R. N.	Manistee

County Society News

GRATIOT-ISABELLA-CLARE COUNTY

The October meeting of the G. I. C. was held in the Alma City Hall, Thursday October 7 at 7:30.

Fifteen members and two visitors were present to hear Doctor W. H. Marshall talk on the Periodic Examination of the Apparently Well. The doctor gave us an instructive and practical talk.

E. M. Highfield,
Secretary.

NEUROLOGY AND PSYCHIATRY SOCIETY OF DETROIT

The 18th Annual Meeting of The Detroit Society of Neurology and Psychiatry, was held at the Hotel Statler, Thursday evening October 7th. This was the first meeting of the year 1926-27, and those in attendance evidenced their interest by an instructive discussion following the paper, "A Case of Questionable Encephalitis," by Dr. Groves Blake Smith. The address of the retiring President, Dr. Thos. J. Heldt concluded the program.

Dr. Theophile Raphael of Ann Arbor was elected president for the year 1926-1927; Dr. Irvin H. Neff, vice president; and Dr. Groves B. Smith, secretary and treasurer. Dr. Thos. J. Heldt and Dr. J. L. Jacoby were elected councillors at large. The next meeting will be held the first Thursday in December.

ALPENA COUNTY

The regular meeting of the Alpena Medical Society was held August 19th at Atlanta. Drs. McKinnon and Wood acting as hosts. After a delightful dinner in the parlors of the Community church Dr. McKinnon, acting as chairman, introduced the speaker of the evening, Dr. R. W. Wood, of Comins, who gave the paper of the evening. Dr. Wood, for many years has written articles for the State Medical Journal entitled "From the Jackpines." He fully lived up to his reputation as a man of independent thinking. His many years of medical practice in the sparsely settled countries has not caused his mental enthusiasm to wane. His observations on the present trend of medical practice were trite and often side-splitting. Dr. Wood, at the beginning of his paper presented the Society with several choice volumes which were to act as a nucleus to a medical library. He also presented our President, Dr. Bell, with a hammer which he introduced the doctor to use in place of a gavel to keep in subjection any inclined to be unruly. The hammer was also to be used in breaking up certain practices which had crept into the practice of medicine. He was particularly witty in his description of the activities of certain health agencies.

Any of the outside societies desiring a refreshing relief from ultra scientific medical papers can have the treat of their lives if they can arrange with Dr. Wood to give this paper before their Society.

C. M. Williams, M. D.
Secretary.

GENESEE COUNTY

The Woman's hospital, Flint, Mich., is having a new addition built. There will be 12 private rooms and a delivery room. This will make a total capacity of 67 beds, 47 for adults and 20 for babies.

Drs. Merritt and Chambers formerly of the department of health in the capacity of city physicians will

enter private practice this month and will be limited to interne medicine.

Dr. B. I. Gutov, Michigan Medical Department, 1925, has been appointed president physician at Hurley hospital.

Dr. and Mrs. David Jickling spent July and August in Europe visiting clinics.

Dr. Max Burnell spent June, July and August in Europe on a clinical tour conducted by the American College of Surgeons.

The interne staff of Hurley hospital consists of Drs. D. F. McArthur, Queens college, Canada 1926. F. B. Legally, Michigan 1926, and E. C. Hanson, Michigan 1926.

THE NEW HURLEY HOSPITAL

The completed plans of the hospital are to be ready, according to contract, December 1, 1926.

The hospital is to be 10 stories high, constructed in the shape of a huge Greek cross. The first unit consists of the two eastern wings and the center administration tower. The first unit will house 280 patients and the second unit will quite likely bring the capacity of the hospital over 500. The cost of the first unit will be slightly less than \$1,000,000.

The building will be the Gothic type, built of reinforced concrete and fireproof throughout. The exterior will be of brick with stone trimmings.

It is expected that bids will be taken during the month of December and ground broken about the first of the year 1927.

HOUGHTON COUNTY

The Houghton County Medical Society held its regular monthly meeting at the (—?—?—?) club, Calumet, Tuesday October 5th, with 21 members present after reading of the minutes and allowing of bills, Dr. A. F. Fischer, recently elected vice president of State Medical Society and dean of St. Joseph Hospital, read a very fine paper on "Human Bookkeeping."

Dr. Fischer's paper dealt with the problem of annual physical examinations and was especially of interest due to the very interesting figures connected with the Preventorium Clinics.

We will send Dr. Fischer's paper to you for the Journal and expect to print it in the local papers. The society discussed this paper and the members and families are reminded of the annual week Nov. 1st to 7th for physical examinations.

Dr. G. M. Waldie, newly appointed resident physician at the Houghton County Sanatorium next gave a talk on "Relationship Between the Medical Profession and the Sanatorium." He outlined the work of the Sanatorium and presented a case report blank which was used in the work. Dr. Waldie expects to modernize the Sanatorium and increase its usefulness. Dr. Waldie's talk was well received and we welcome him to our society of which he expects to become a member.

We were very fortunate to have with us Dr. R. L. Kahn of the State Laboratory who in his usual pleasing manner gave us a very instructive talk.

Dr. Kahn reviewed the laboratory work in general urging the necessity of having and using the various tests. He also gave us some very interesting data on the comparative results of seven laboratories that have been testing out the Kahn test in comparison with the Wassermann and various modifications of it. Dr. Kahn answered many questions and gave us some very interesting facts.

Society then adjourned to lunch.

Respectfully

G. C. Stewart,
Secretary-Treasurer.

MACOMB COUNTY

The regular monthly meetings of the Macomb County Society were resumed, after the summer recess, when 25 members of the Society gathered together October 4th at the Colonial hotel, Mt. Clemens, for a noon-day meeting.

About a week previous to this we had a visit from Harvey Smith, who informed us that as a Society we ranked rather low and needed rejuvenating. In order to restore the spirit of youth he arranged a very excellent program for us, and was rewarded by a very fine turnout.

Luncheon was served at 12 o'clock followed by the business meeting and program.

The minutes of the previous meeting were read and accepted.

Report of Dr. C. E. Greene, delegate to the state convention, was heard.

Following this the executive secretary spoke for a few minutes, stressing the relationship of the County Medical Society to the other professions in the community, also how a Society could function as a means of educating the public in scientific medicine. He spoke of many ways in which this could be done such as educational talks before high school students, Parent-Teacher Associations, luncheon clubs, etc., by properly qualified speakers. This matter of public education he stated should be considered a part of the work of each County Society program—the securing of speakers, etc., being the work of a special educational committee made up of members of the Society.

The Manuals of suggestions for the conduct of Periodic Examinations of Healthy Persons, were distributed to those present, and following this Dr. W. H. Marshall of Flint, addressed the Society on the subject of "The Periodic Examinations of the Apparently Well."

Dr. Marshall's excellent talk which was full of interesting and valuable ideas, so brought home the importance of periodic health examinations that a motion was carried at this time, authorizing the president to appoint a committee whose duty it would be to arrange for a health examination for each member of the Society—by two of his fellow physicians.

The meeting closed with a rising vote of thanks to Dr. Marshall and Mr. Smith for their efforts in making possible this fine program which we all enjoyed so much.

Yours very truly,

Alfred A. Thompson,
Secretary

GRAND TRAVERSE-LEELANAU
COUNTY

You have not heard from this live society for some time, but we are glad to give a report of ourselves for the last three months. Up here, in the "Heart of Nature's Playground," the doc's are unusually busy during the resort season; yet they have found time for a few intellectual and social feasts. In July we were royally entertained by Dr. Victor C. Vaughn at his beautiful summer home at Old Mission. His two sons, Drs. Henry and Walter, were present, and both furnished very able papers. Mrs. Vaughn filled us to overflowing with fried chicken and everything that goes with it. We claim Dr. Vaughn as one of our own, for he has made this neck o' the woods his summer home for more than 30 years. Needless to say

the day and evening with Dr. Vaughn was joyfully and profitably spent.

Our August meeting was held at Dr. Kyselka's cottage on the shore of Long lake, seven miles from town. We were all there, for the meeting was both business and social—mostly social. Any Bohemian dish that Mrs. Kyselka overlooked was supplied by Mrs. Sladek. (Two fine cooks who know how to make kolaches and saurkraut.) For many reasons it was difficult to get down to real business, but we did manage to elect Dr. Covey of Honor and Dr. Gordon of Maple City, into full membership. Of course we are going out there again—next summer.

Our September meeting was one of the best ever. Dr. C. E. Boys, of Kalamazoo, was the specially invited guest, and he brought a world of good things for us. In the evening he gave a fine illustrated talk on Goitre, after which he entertained us with a moving picture of his hunting trip last year to the Canadian Rockies. This was an hour of real pleasure. Next morning Dr. Boys did five cases of Thyroidectomy, also a complete hysterectomy. A good clinic.

At the Post-Graduate conference held in Manistee October 14th, 11 of the Traverse City medics drove over, leaving only two in town. In the meantime our patients had a good chance to get well.

At this writing our president, Dr. Sladek, is taking a Post-Graduate course in Chicago, Dr. Thirby is spending his customary week-end at the Ann Arbor football game, and Dr. Swanton is on his usual weekly trip to the graveyard at Edenville, where he says there is room for all of us when we *shuffle off this mortal coil*.

G. A. Holliday,
Secretary.

CLINTON COUNTY

The Clinton County Medical Society opened the 1926-1927 with a splendid meeting both from the standpoint of attendance and benefits obtained. The meeting was held at the offices of Drs. Hart, Hart, Luton and Foo, St. Johns, Mich.

The meeting was called to order by President Taylor of Ovid. The minutes of the previous meeting were read and approved. Election of officers for the coming year was in order, and the following officers were elected: President Dr. E. Hart, St. Johns; Vice-President Dr. H. D. Squair, St. Johns; Secretary-Treasurer, Dr. T. Y. Ho, St. Johns, (re-elected).

Dr. V. C. Abbott, who recently became associated with the firm of Hart, Hart, Luton and Foo, tendered his formal application for admission to membership in the Clinton County Medical Society. His application was balloted and accepted.

After the business meetings we were favored with a most excellent and timely topic. "Fractures" by Dr. Carl Badgley of University Hospital, Ann Arbor. Dr. Badgley presented his subject in such a practical manner, illustrating his talks with slides as he went along, that all those present were thoroughly convinced that it was well worth the time to come and hear him, even from distances of 40 miles and upwards.

Dr. Badgley informally pointed out the more common and sometimes the more difficult fractures that the everyday physician encounters in his practice, and demonstrated the easier way of manipulating these fractures with the hope of obtaining better approximation of the fragments. His paper was discussed by Dr. George Curry of Flint, after which all the other doctors from Owosso, Flint and Ann Arbor also informally partook in the discussion of this very im-

portant subject of fractures. Dr. Badgley laid especial emphasis on the use of the X-ray examination of all cases of fractures, both before and after manipulation, in order to avoid difficulties arising in the law courts.

Our new district councillor, Dr. Henry Cook of Flint then outlined to us what we, as members of county societies should do in order to bring the public into closer understanding and friendliness with the medical profession. To this end he suggested the idea of a mixed meeting, to which the public should be invited to participate in the discussion of various health topics and public welfare in general.

The meeting of the society was then adjourned until the next meeting which will be held on Nov. 4, 1926 at 6:30 p. m. at the Steel hotel, St. Johns, Mich.

KALAMAZOO COUNTY

A regular meeting of the Kalamazoo Academy of Medicine was held at the Kalamazoo Country club on the evening of September 21, following a delightful dinner served in the club dining room.

The minutes of the June meeting as printed in the Bulletin were read and approved; Dr. R. J. Hubbell acting as secretary pro tem.

Dr. Gregg, chairman of the social committee, reported on the status of their work in connection with the equipment for serving meals in the Academy rooms. Dr. Light gave a more detailed report from blue prints stating that the cost would exceed by \$500 the amount that was now in the treasury. Dr. Crum moved that the social committee be extended a vote of confidence and be empowered to complete plans for the installation of the equipment. Dr. Thompson seconded the motion; carried.

The applications for regular membership of Dr. Roscoe F. Snyder and associate membership of Dr. L. A. Kenoyer were voted on favorably by the Academy. Dr. Ray T. Fuller of this city filed application for regular membership and Dr. James H. Swan of Marcellus filed application for associate membership.

Dr. Shepard, chairman of the campaign committee, reported a very quiet and successful campaign at the state meeting at Lansing; the result being that Dr. Jackson was elected president of the state society and Dr. Boys was elected as councillor from this district.

Dr. McNair from the president's chair made a few remarks of sincere appreciation for the work of Dr. Jackson in the state society. Dr. Jackson responded by expressing his gratitude to the Academy and Dr. A. H. Rockwell for giving him the opportunity to serve in the state society. He spoke of the new work the society was taking up for enforcement of the Medical Practice act, the legislative policy being one of combined interests of all organizations interested in the health of the community.

Dr. Crum, chairman of the Greater Kalamazoo committee, gave notice of the parade that was to be held October 5th and expressed the desire that a float representing the Kalamazoo Academy of Medicine be entered. Dr. Bennett moved, Dr. Crane seconded, that the proposition be accepted and that Dr. Crum be instructed to carry the plans to completion. The motion was carried after discussion by Drs. Jackson and Shepard.

The roll was called of all members present and each one responded with a very interesting case report. Adjournment.

R. J. Hubbell.

Among the Books

A Review and Frank Appraisal of Medical Books That are Proffered to the Profession by Publishers.

MODERN CLINICAL SYPHILOLOGY: John H. Stokes, M. D., Professor of Dermatology and Syphilology in the School of Medicine, University of Pennsylvania; Professor in the Graduate School of Medicine, University of Pennsylvania. Octavo of 1444 pages with 885 illustrations and text figures and more than 200 detailed cases histories. Cloth \$12 net. Philadelphia and London. W. B. Saunders company, 1926.

This is the most exhaustive text on the subject extant. It is most complete in all of its discussions and thorough in evaluating all the factors involved in this disease. Illustrative case histories materially enhances the text. The consideration given to late syphilis is an outstanding feature. As a digest of the subject it assumes a foremost position in our literature.

THE MEDICAL CLINICS OF NORTH AMERICA (Issued serially, one number every other month.) Volume X, Number II, (Philadelphia Number, September, 1926.) Octavo of 217 pages with 16 illustrations. Per Clinic year, July 1926 to May 1927, Paper, \$12; Cloth \$16 net. Philadelphia and London. W. B. Saunders company.

THE SURGICAL CLINICS OF NORTH AMERICA: (Issued serially, one number every other month.) Volume VI, Number III (Chicago Clinic Number—August 1926.) 324 pages with 101 illustration. Per Clinic year (February 1926 to December 1926.) Paper, \$12; Cloth, \$16 net. Philadelphia and London. W. B. Saunders company.

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